

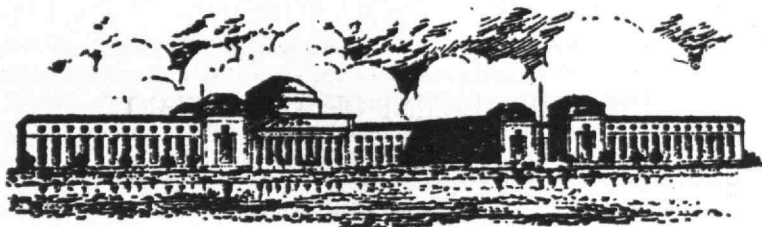


HARRY J. CARLSON, '92
President of the Alumni Association

technology review

Published by MIT

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The Technology Review

Published at Cambridge 39, Boston, Mass.

ROBERT E. ROGERS, *Editor*, Massachusetts Institute of Technology, Cambridge, Mass.

VOL. XXIV

JULY, 1922

No. 3

A NEW ALUMNI PRESIDENT, A NEW ALUMNI REVIEW

HARRY J. CARLSON, '92, whose first message to the alumni begins on the next page, will have, as the organ of his office and policies, a new ALUMNI REVIEW — at least, one so reorganized that that will hardly be recognizable to the readers of the old magazine.

For some time that committee of the council which has the REVIEW in charge has felt it necessary to follow the lead of the other great alumni associations, drop the quarterly record and publish more of a news magazine. In the future, we hope, a weekly — for the present, at least, a monthly, beginning next November. New format, new cover, new features, new policies, new editors — 'n everythin'.

Of the personnel of the new magazine we have a bit more to say elsewhere in the issue. Suffice it for this announcement that the editor will be Harold E. Lobdell, '17, and the managing editor, Eric F. Hodgins, '22, both members of this club. The present editor will accept the soft job of contributing editor — just like T. R. once upon a time — and will begin to catch up on his sleep.

President Carlson will have at his command such an instrument as no previous alumni president of Technology has ever had; the members of the Alumni Association will have a better magazine than they ever dreamed of, less like the famed bronze tablets that commemorate Tiglath-Pileser and more like fresh news from the home folks; and the Institute, like Archimedes, will have a lever wherewith to move the world. Than which — well, just than which!

R. E. R.

TO THE ALUMNI OF TECHNOLOGY

Harry J. Carlson, new president of the Alumni Association,
writes in salutation

Fellow Alumni:

As president of the alumni body it is a pleasure to give you all a word of greeting.

The war is over and, with the war's losses, we cannot forget that the forced overwork of that period cost us our president — lost us a leader preëminently fitted for the herculean task of leading us to heights that we shall, only with great difficulty, attain again. The school of President Rogers' time was not the school that President Maclaurin left. Greatest honor to President Rogers for the conception, but to President Maclaurin came the task of bringing the school to manhood's estate and then to lay aside the task as though he said, "You are full grown — you are men — govern yourselves." Now, almost three years after his death we realize more fully his skillful leadership and that since then we have been running on momentum and that already we are beginning to slow up — and this in spite of the fact that we have a most able administrative committee — men who have given unselfishly of themselves and given to the very limit. But no committee can be as effective as a single head.

We need the force and the directness of a new president and the task he faces is no small one.

First: A family of almost five thousand if we include students, faculty and working force.

Second: A summer school that again approaches the above figures.

Third: A potential alumni body of almost fourteen thousand, and this body constantly growing. (Some seven hundred and thirty degrees were granted at this year's Commencement).

Fourth: We have a plant that, in its adaptability and its equipment and in its architectural excellence, may well be the envy of any institution of learning.

Fifth: We have invested funds that even the far seeing President Rogers could scarcely have imagined as possible.

Sixth: We have a devoted faculty and a wide awake Corporation.

Seventh: We have what every business man values — a good name — a good reputation.

In fact the new president will find a going concern of magnitude, and his first concern must be to apportion and subdivide his duties to such an extent that he will have time to think — time to create — time even for leisure, so that whatever he gives us will be the result of mature and united thought of all concerned. The president cannot do this

alone — he needs the loyal support of the faculty and of the students and the coöperation and experience of the alumni.

There was a time when an alumni body was a school appendage — at best social, reminiscent, archaeologic — but those days are gone. The alumni body of today is alive to present day needs. It is looking forward to the greater days of tomorrow and reminiscence of the past is merely the connecting link between the school that was and the school that is hoped for. [The alumni is a liaison body between the school and the public and its duty is to keep the school and its faculty in close touch with the constantly changing realities of the world outside. For the world has no use for the science of yesterday. It wants the science of tomorrow and wants it today.]

[But there is another duty of the alumni as important as keeping the school up to date, and that is the finding of funds that make necessary changes possible. Technology has given us of her very best. Technology has made possible our success and we would in return give our alma mater the very best of our brains and of our means.] I have made some calculations recently that show our present time needs as requiring some \$55,000,000 additional funds. So send in your dollars — your hundreds — your thousands — yes, even your millions and be assured that there is need for all that you send. When the new president comes (and he may be here before this is printed) let him find a full treasury — that will give him means to carry out policies instead of immediately packing his bag and setting out in search of a new “Mr. Smith.” (Thank God for one “Mr. Smith” — now our George Eastman — where would we be today without him?)

You of the alumni body who are far away and who do not return periodically to Tech would be surprised to see the changes that have come of late years. I do not refer to physical changes, although these many changes have been marvelous, but to the inner, the unseen changes. I refer to the growth of Tech spirit and Tech pride among the students themselves. Think of over fifty per cent of the student body taking part in athletics and achieving wonderful results almost without funds. Think of the student body voluntarily taxing itself \$15 per student per year to carry on activities and then you, Mr. Alumnus, dig down and find your part of the annual \$50 that it is hoped each graduated class will find for school activities. Do you read the excellent Tech publications? Have you attended the various plays and the musical, social and athletic events that show the spirit behind the student life? Do you know of the growth of student councils and the starting of the honor system in examinations and do you realize how all this would be helped if you would give us dormitories?

But there is a second change equally important and far reaching, and it lies in a demand for a new kind of education at Technology and the growth of this demand is one of the most hopeful things about our school. I refer to the wish for broadening business courses and for cultural courses in addition to the essential technical subjects: courses that will help build character and broaden the horizon, so that when the

great opportunity comes to the Tech man he will be ready. The future of America rests in our hands. The past of our country has been criminally wasteful; the future, if it is to be successful, must be scientifically economic, must be intense, must be far sighted and must deal in larger and larger factors. There was a time when Tech men were merely skillful underlings: now they are being trained as leaders whom the financiers will be glad to follow.

A glorious future and its success depends on you and on your loyalty to your alma mater, an alma mater that has given you the mental equipment that has made you the success that you are and has given you the vision to try for an ever-bettering best. So all up for Technology; all up and toast

"The best that is in us for the best school of all,
Technology!!"

HARRY J. CARLSON.

HARRY JOHN CARLSON, '92, A SKETCH

ONE of the most interesting speeches given before the Alumni Council this past year was that in which Harry J. Carlson, retiring term member of the Corporation, gave a modest and unaffected account of his stewardship. His particular interests lay naturally in the department of architecture and his account of the steps that had been taken of late to put it once more in the position it had occupied during the life of Despradelle, and of the interesting things that were being done and planned, was undoubtedly an eye-opener to many members of the council. After Mr. Carlson had finished we learned from other men closely associated with him on the Corporation that to Mr. Carlson was due much of the credit for the things of which he had been speaking. The most fortunate choice of the head of the department of architecture, William Emerson, the series of approaches by which the departments of architecture of Technology and Harvard had worked out an unusual method and degree of coöperation through competition as well as through mutual help, the enlarged and strengthened personnel of the department — these, we learned, we owed in large measure to Mr. Carlson. Not to forget the new Walker Memorial Dining, a boon to those of us who have to eat there which aliens (people west of Worcester) cannot really appreciate. We venture an editorial guess that it was that evening which did the deed, thrust the exacting duties of president of a great alumni association upon the broad but busy shoulders of Mr. Carlson.

Mr. Carlson was born in St. Paul, Minnesota, November 8, 1869, but has had the good sense to live in Boston most of his life. He graduated from the Institute in 1892; for two years from 1894-6 he was in

the contracting business; then until 1903 he worked as an architect on his own. Since 1903 he has been a member of the euphonious firm of Coolidge & Carlson. Among the well-known buildings of the firm are "Dreamwold," Thomas W. Lawson's farm at Egypt, Massachusetts; the Girls' Latin and High Schools, the Boys' Latin School and the Normal School groups for the city of Boston; the Harvard Freshman dormitories; the Chapel at Bates College and many office buildings, churches and residences.

Mr. Carlson was married in 1896 to Miss Carrie E. Comforth. Mr. and Mrs. Carlson have four children. Mr. Carlson is a trustee of the Newton Centre Savings Bank, he was formerly lecturer on architecture at the Massachusetts Normal Art School, he is a fellow of the American Institute of Architects, member of the Boston Society of Architects and member of the Boston Chamber of Commerce. *His favorite recreation is travelling.*

That last sounds good. There are several dozen Technology local clubs and associations scattered through this broad and smiling land, including Hawaii and Japan, that are powerful lonesome and want to be visited. We have a president to whom it is a pleasure as well as a duty to travel. All in favor say, "Aye." It is a vote!

R. E. R.

THE ANNUAL MEETING OF THE COUNCIL

THE ninety-first and annual meeting of the council of the Alumni Association was held as usual in the Walker Memorial after dinner on the evening of May 28. There was an unusually large attendance present when Pres. A. D. Little opened the meeting. The first business was the election of the nominating committee for next year from a long list of names suggested. This proceeded in charge of Messrs. Robbins and Lobdell, tellers, while the annual reports were being read.

The secretary made the report of the alumni ballot, announcing the elections as follows:

As a result of the annual election of officers of the Alumni Association of Technology, Harry J. Carlson, '92, was named president. Mr. Carlson was a member of Course IV and is at present connected with the firm, Coolidge & Carlson, Architects. Frank C. Schmitz, '95, was elected vice-president of the Association and Prof. Walter Humphreys, '97, was elected secretary-treasurer. Three term members of the Corporation were also elected. They are F. W. Lovejoy, '94, W. C. Potter, '97, and L. D. Gardner, '98. Mr. Lovejoy was a member of Course X while at the Institute and is at present the vice-president of the Eastman Kodak Company. Mr. Potter, a member of Course III, is now the president of the Guaranty Trust Company of New York. Mr. Gardner, graduate of Course IX, is now president of the Gardner, Moffat Company of New York.

Other results of the election of officers are, for executive committee, Hiram P. Maxim, '86, and Wallace C. Brackett, '95. Five representatives-at-large were also elected as follows: Thomas D'A. Brophy, '16, Gorham Dana, '91, Frederic W. Fuller, '96, Elisha Lee, '92, and Harry H. Young, '91.

F. L. Locke, '86, made the report for the nominating committee, and then the annual reports of the officers and the various committees were read. All of these are printed in full in this issue immediately following this article. They were annual report of the secretary-treasurer, Walter Humphreys; auditing committee by Dr. Rowe; committee on permanent funds by R. H. Richards, with some discussion as to whether the trust funds of the publications should be taken care of by this committee.

A. T. Hopkins, of the committee on TECHNOLOGY REVIEW, read the brief recommendation that the magazine should, beginning next fall, become a monthly with a full-time editor; Mr. Young, in the absence of Dr. Tyler, read the report winding up the work of the Technology War Records Book. The committee was highly praised by the chairman and given a rising vote of thanks.

A letter was read from the executive committee of the Corporation by which the recommendations of the committee on a permanent art

commission were asked to be held in abeyance until a new president was elected. Dr. Rowe's eloquent extemporaneous abstract of his report with its record of fine accomplishment on small means was greeted with well deserved applause. The chairman then spoke briefly of the bill introduced by him before the Legislature asking for a commission to investigate the need for a new bridge over the Charles River and said that a hearing upon it was imminent.

Prof. Archer T. Robinson, retiring chairman of the Advisory Council on Undergraduate Publications, read a report speaking in high praise of all the publications and their notable improvement during the past year, following which a minority report was read from the other members of the committee, dissenting from Professor Robinson's report insofar as to give most of the credit for the work of the committee to Professor Robinson's own efforts. Great applause!

The committee on budget and finance gave high praise to the undergraduates' conduct of their financial affairs during the year as being in every respect professional and businesslike. Following this came the reports of the Walker Memorial by Mr. DeBell, on the Tech Show by Mr. Macomber, and on the Musical Clubs by Professor Bugbee. The suggestion was made and greeted with applause that the Musical Clubs be invited to furnish music at the annual dinners and other ceremonies of the Alumni Association. Mr. Glidden then made informal report of progress on alumni coöperation with the senior class on Pops night.

Mr. M. L. Emerson read a report of progress on the alumni director, explaining why nothing definite had been accomplished and restating his opinion that nothing could be done until a new President of the Institute was elected. Colonel Locke reported for a special committee against the suggestion that special aid be given students from Russia, it being the sense of the meeting that the Institute should not discriminate in favor of any particular nation.

The president of the senior class, Don Carpenter, was greeted with applause when he told of the special campaign carried on in the interest of members of 1922 in the Alumni Association, as a result of which over sixty per cent had enrolled as members of the association and would receive the REVIEW next year (their dues being paid, it may be said, out of their laboratory deposit).

This concluded the reports, which as Dr. Little said, made a broad, vivid and encouraging picture of the scope of the activities of the association.

The ballots, first and second, for the Nominating Committee for next year having been counted, it was found that there were elected Messrs. Little, '85, Rowe, '01, and Dewey, '09, for three years and J. P. Munroe, '86, for one year.

Mr. Macomber rose to complain of the ignorance in which the members of the Association and those closely connected with the Institute were being kept in regard to the progress about electing a President, and asked if there were nothing that could be told. As there

was no member of the executive committee of the Corporation present, no information was vouchsafed the council.

Mr. Lawrence Conant, '21, instructor in Course XV, spoke briefly to the council about a book he intends to publish next fall, called "Tackling Tech," intended as a *vade mecum* to the undergraduate. A notice of the book will be found on another page.

Mr. Stephen Townsend, who has been directing the new Choral Society of undergraduates and alumni this past year, was introduced to the council and warmly received, making in return a graceful and witty little speech about the possibilities of musical interest and culture at the Institute.

The chairman, Dr. Little, then thanked the council for its support during the year, paid the usual meed of praise to Walter Humphreys, and introduced the new president of the association, Harry J. Carlson, '92. When it was seen that Mr. Carlson, in view of the lateness of the hour, was not going to speak, the council gave him a hearty and grateful round of applause and ran for their Cadillacs.

R. E. R.

ANNUAL REPORT OF THE SECRETARY-TREASURER FOR THE YEAR 1921-1922

Membership: The membership of the Association on January 1, 1921 was 8,296. This has been increased by 606 graduates of the class of 1921 and 28 additional graduates who received their degrees in December and by 74 elected members. The number has been reduced by the death of 38 members and 33 who dropped from membership because of non-payment of dues and 2 who resigned, making a *total membership of 8,931*. Of this total membership 377 are life members, a gain of 13 life members during the past year. During this year one has been added to the list of honorary members, Dr. Ernest Fox Nichols, who was elected President and inaugurated in June, 1921. The increased number of members during the past year is due to the splendid effort made by Mr. A. J. Browning, '22, who was employed by the Association to increase the subscriptions to the TECHNOLOGY REVIEW and who worked faithfully during the past summer. Following a suggestion made by him the senior class is endeavoring to canvass its members to secure subscriptions for the REVIEW and for membership for the coming year. This should increase membership of the Association substantially.

Dues: In the year dues were received from 3,914 members, being 44 per cent of the total, as compared with 43 per cent of last year.

Meetings and Topics of Discussion: There have been six meetings of the council with an average attendance of 46. Once during the season a joint meeting with the Faculty Club was held, at which about 100 of the Faculty and the council were present. Prof. Henry T. Moore of Dartmouth and Dean Wallace B. Donham of the Harvard Graduate School of Business Administration gave talks upon intelligence tests. The members of the council and Faculty present took sample tests.

Following the custom of a number of years, at the October meeting a conference was held between the retiring and newly elected Alumni Term Members and at the same meeting the new chairman of the Faculty, Prof. E. F. Miller, addressed the council upon plans of the Institute for the coming year. Also at the October meeting, Prof. A. T. Robinson, who had been on a business trip and had been able to meet with the local associations in Washington, Pittsburgh and Cincinnati, made a report of his visits with these associations. Following this interesting report President Little wrote the members of the Faculty, requesting them to notify him, or the secretary, when they were to travel from Cambridge, in order that the local associations might know of visits from members of the Faculty or officers of the Institute. A good response was received and visits to a number of the local associations have in this way been planned. Never before have the local associations received so many visits from people of Technology during one season.

Mr. Everett Morss, Treasurer of the Institute, visited Chicago and Buffalo; the President of the Association visited the Tech Club at New Orleans; the Secretary visited the local association of St. Louis; Professor Lewis visited New Orleans, Birmingham and Dayton; Professor Wilson of the Faculty visited Chicago and later Washington; Professor Jackson visited Toronto; Professor Miller, Indianapolis and Fall River; Dr. Little, with Mr. Morss, Treasurer of the Institute, and a number of local alumni, visited New York Technology Club at their annual meeting; Professor Talbot visited New Haven, Rochester and Cleveland; the Pittsburgh Association was notified of the visit of Professors Dewey, Doten and Tyler at a convention held at Pittsburgh. The local associations seemed to welcome these visits from Technology.

At another meeting Mr. Robert D. Andrews, '77, was invited to present his plans for a memorial bridge to take the place of the present Harvard Bridge. An attractive drawing was shown and the matter of a memorial bridge was discussed, as compared with an island which some have proposed to put into the Charles River Basin. Much interest was shown in the plan for a memorial bridge.

At an earlier meeting, Dr. Rowe introduced the question of a Choral Society which should be made up of alumni and undergraduates, a society which could attempt more serious music than has been chosen recently by the usual Glee Club of the Institute. This plan for an opportunity of alumni to coöperate with undergraduates appealed strongly to the council and a committee was appointed to assist in organizing the society. Through the generosity of Mr. Stephen S. Townsend the society has had an unusual opportunity and has organized. At the end of its season it met with the musical clubs of the Institute in a concert held in the Walker Memorial in April. Due to the unusual skill of the leader the society has made a distinct success and only too few alumni have availed themselves of this opportunity. Those present at the concert when the Choral Society sang were much gratified with the distinct quality of tone and most satisfactory results of the season. If more Technology alumni realized the success made by the society they would regret all the more that they had not participated to a greater extent in its upbuilding.

The interesting question of honorary fellowships at the Massachusetts Institute of Technology, as compared with the policy of granting honorary degrees, has been introduced for discussion by your president and has been referred by the council to a special committee to consider the problem.

Events: Since the last annual meeting Dr. Ernest Fox Nichols was inaugurated President of the Institute and the Alumni Association coöperated with the Corporation and the Faculty in making arrangements for this inauguration, which was followed in the evening by an alumni banquet to the new President. At this banquet a desk was presented to the new President for the president's office of the Institute. Since that time, because of ill-health, Dr. Nichols resigned the presidency



HAROLD E. LOBDELL, '17
The New Editor of the Review

Ye Craftsman Studio



Ye Craftsmen Studio

ERIC F. HODGINS, '22

The New Managing Editor of the Review

of the Institute. Dr. Nichols since his resignation has given his desk to succeeding presidents and it will bear the following inscription:

"Presented to President Nichols by the Alumni Association on the day of his inauguration, June 8, 1921, and given by him to his successors in the presidency, each in turn, as a constant reminder of the unfailing devotion and support of Technology Alumni."

The annual dinner was held in January at which there were present four hundred and fifty alumni. An account of this appears in the **TECHNOLOGY REVIEW**.

Committees and Reports: During the year the committee appointed to consider the problem of a director has not made a final report. Interest, however, has been shown by local associations in this problem and letters have been sent to your president and to the Executive Committee which have received attention and have been referred to the special committee. During the year a committee appointed to consider the question of portraits of past presidents made a report which was comprehensive and suggestive. This has been received and reviewed by your Executive Committee and referred to the Executive Committee of the Corporation which has accepted it to place before the new president when appointed.

Relation with the Undergraduates: Coöperation with the undergraduates has continued as in previous years. It has been the practice at these meetings to invite groups of undergraduates of the senior class, in order that they might become more familiar with the working of the council and take this knowledge with them as they separate into different parts of the country. The undergraduates have presented to the council during the past year their appeal to the Corporation for an increase in the undergraduate tax or dues. The result of this petition has been to have the Executive Committee of the Corporation transfer the three dollars paid from the student tax to the Walker Memorial to the athletic needs. The students in this way will have three dollars more for athletics without an increase in their tax rate. The council was very much interested in the report which was presented by the undergraduates and it was ordered to print this report and circulate it among the council, Corporation and Faculty and to leading colleges of the country. The undergraduates have invited the Alumni Council to coöperate with them in reorganizing the former Pop Concert and to have additional moving picture films taken of undergraduate activities, which may be circulated among the various local associations at their meetings.

War Records: The Executive Committee has accepted the financial responsibility of the War Records and has voted its appreciation of the excellent work done by the chairman of this committee and his associates. It has reimbursed the loyal alumnus who advanced capital that the book might be printed. There still remain a number of alumni who have failed to pay for the books which were ordered and delivered. As these subscriptions are received the Association will be reimbursed

for advancing the money to cancel the loan made to the War Records Committee.

As treasurer of the Association a report can be made that during the past year a surplus of \$849.55 has been accumulated and added to the surplus accumulated during the past few years. It is pleasing to note that the deficit of the TECHNOLOGY REVIEW is smaller than it has been for a number of years. It is also interesting to note that the alumni during the past year who have paid their dues made a percentage slightly larger than last year. This has made, with a slight increase of members, an increasing income. It should be remarked, however, that if it had not been for the sustaining members during the past few years there would have been an increasing deficit instead of the surplus which has been gathered.

The Association has accepted certain trust funds for some of the advisory councils on undergraduate activities. It holds for the Tech Show a trust fund of \$1,021.15, for the Advisory Council on Undergraduate Publications funds amounting to \$6,119.41, for the *Technique*, *The Tech* and the *Tech Engineering News*.

Unless the alumni who subscribed to the War Records fulfill the obligations of their subscriptions the surplus of the past year will be wiped out by the assumption of the financial responsibility of the War Records Committee in paying up the loan which has generously been loaned for the publication of the War Record Book. It is anticipated, however, that the Technology alumni will meet their obligations and re-establish the surplus made during the past year, that it may be available for some permanent Technology need.

ALUMNI ASSOCIATION, MASSACHUSETTS INSTITUTE
OF TECHNOLOGY, DECEMBER 31, 1921

BALANCE SHEET

Assets:		Liabilities:	
Cash	\$2,478.67	Accounts Payable	\$913.54
Accounts Receivable	2,139.14	Life Membership	650.00
Furniture and fixtures	822.65	Advance Payments	1,423.75
Inventory, December 31, 1921	1,010.43	War Records	293.98
	<hr/>		<hr/>
	\$6,450.89	Surplus, January 1, 1921	\$3,286.27
		Surplus for year 1921	2,315.07
		(Accumulated Surplus	849.55
		\$3,164.62)	<hr/>
			\$6,450.89

Expenses:		Income:	
<i>Alumni Association</i>		<i>Alumni Association</i>	
Secretary's salary	\$500.00	Sustaining Membership (1/2)	\$862.50
A. A. Labor	2,384.53	Dues, 1921	5,878.50
Postage	1,103.19	Back Dues (1/2)	602.25
Printing	761.30	Interest and Discount	398.05
Stationery and supplies	647.10	Profit on Office	729.17
Carfares and express	39.60	Gift	490.00
Collection expense	7.66	Miscellaneous	59.62
Council expense	70.20		<hr/>
Telegraph and telephone	94.83	Sub Total	\$9,020.09
Miscellaneous expenses	411.91		
Alumni dinners	82.90	<i>Review</i>	
Committee on American Uni-		Sustaining Membership (1/2)	\$862.50
versity Union in Europe	91.40	Subscriptions, 1921	5,992.50
President's desk and chair	750.00	Back Dues (1/2)	602.25
Intercollegiate Conference	750.00	Special Subscriptions	54.00
Tech Choral Club	115.93	Cash Sales	9.00
Traveling expenses	18.33	REVIEW Advertising	4,024.73
	<hr/>		<hr/>
Sub Total	\$7,828.88	Sub Total	\$11,544.98

<i>Review</i>	
Editor's salary	\$500.00
Advertising Manager's salary	500.00
Office labor	963.05
Postage	326.16
Paper	2,497.08
Printing	5,963.92
Illustrations	247.21
Supplies and expenses	78.32
REVIEW Campaign for Subscrip-	
tions to the REVIEW	719.49
	<hr/>
Sub Total	\$11,795.23
Depreciation on furniture and	
fixtures	91.41
	<hr/>
Total Expenditure	\$19,715.52
Surplus, 1921	849.55
	<hr/>
	\$20,565.07

Total Income	\$20,565.07
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ANNUAL REPORT OF THE COMMITTEE ON PERMANENT FUNDS FOR THE YEAR 1921

THE Committee on Permanent Funds makes the following annual report:

The trustees hold for the Alumni Association three funds: the William Barton Rogers Scholarship Fund, the Alumni Fund of 1880, and the Life Membership Fund. The capital accounts of these funds, as noted by the report examined and approved by the auditors, under date of December 31, 1921, were as follows:

STATEMENT	
Cash.....	\$4,285.04
Securities.....	22,686.25
Personal Accounts.....	7,990.00
Income in Suspense.....	201.00
Liberty Bond Coupon.....	3.18
Accounts Receivable.....	650.00
	<hr/>
	\$35,815.47
Rogers Scholarship Fund (capital).....	\$11,608.69
Rogers Scholarship Fund (loan account).....	12,457.42
Life Membership Fund.....	10,518.71
Alumni Fund.....	1,188.20
Accounts Payable.....	42.45
	<hr/>
	\$35,815.47

The Life Membership Fund has increased during the last calendar year by \$650 from life membership fees and \$339.22 from income on investments. The Alumni Fund has gained the amount of \$38.21 only by income from investments. The Rogers Scholarship Fund loan account has increased to the amount of \$1,119.47. Ten per cent of the gross income of this fund and ten per cent of loans repaid are credited to the capital account each year by vote of the trustees.

During the calendar year of 1921, \$3,930 was loaned to twenty-three individuals. Of this amount \$750 was paid back during the year. During the calendar year \$1,275 was collected on former loans. This compares most favorably with the best record of the committee, as the amount loaned is larger than at any previous year and the number of individuals, twenty-three, is the largest since 1916. It is also interesting to note that the amount paid back by individuals which becomes immediately available for further loan, with the two exceptions of 1911 and 1916, has been larger than any other time within the past thirteen years.

The committee has reviewed the condition of the outstanding notes and feels content with the present condition, but is desirous of having even a larger amount promptly paid back by the beneficiaries.

ANNUAL REPORT OF THE COMMITTEE ON TECHNOLOGY REVIEW

YOUR committee is bound to state that this important interest of the alumni is not yet adequately cared for. It is our belief that the proper man giving his entire time to this work can increase subscriptions and advertisements and make it profitable. At the same time the publication can be changed to at least eight issues a year and class news and other departments brought more nearly into the present tense. We ask for authority to engage such a man for a year, at a salary to be approved by the Executive Committee. We should also like to retain Professor Rogers as literary advisor. We may state that this plan has the cordial approval of Professor Rogers.

WILFRED BANCROFT, '97,
DONALD G. ROBBINS, '07,
R. H. SMITHWICK, '21,
H. F. WONSON, '07,
ARTHUR T. HOPKINS, '97,
Chairman.

May 18, 1922.

THE INDEX

THE present volume closes with this issue, and the index for the January, April and July numbers is included.

The next volume will begin with the November issue and the volumes will hereafter coincide with the academic year.

REPORT OF COMMITTEE ON WAR RECORD BOOK FOR THE ALUMNI COUNCIL

THE Committee was appointed by President Henry A. Morss, '93, of the Alumni Association early in 1919, to take up the matter of preparing a war record of Technology and its alumni.

The early discussions of the committee convinced its members of the importance and magnitude of the work and of the inevitable dependence of good results on the choice of a thoroughly competent service man as full-time editor. The committee was (after considerable search) so fortunate as to obtain the service of Captain John H. Ruckman, of the Class of 1910, who began his duties July 1, 1919, and continued on a full-time basis until September 30, 1920, leaving then to undertake professional work in another part of the country. The completed book is the best evidence of the success of Captain Ruckman and his staff in carrying out a very arduous undertaking and in blending the innumerable contributions of many different persons into a consistent and harmonious whole.

The ultimate size of the book could not, of course, be determined in advance, yet it was necessary to base business arrangements on some hypothesis, as to the demand for it. This in turn implied an estimate of size and of cost production. The committee, desiring to give the book as wide a circulation as possible, set the subscription price at three dollars, which proved ultimately too low and for later subscribers was advanced to five dollars. The actual cost of printing, binding and distributing the book, including some but not all of the overhead expenses, was approximately eight dollars per volume. The size of the edition was fifty-five hundred, and the orders received a few hundred less. In order to bridge the interval in time between the completion of the book and the receipt of funds from subscribers, it became necessary to borrow fifteen thousand dollars, which was very generously loaned by General Coleman du Pont, then President of the Alumni Association.

The financial report as of May 1, 1922, is in its main features approximately as follows:

RECEIPTS

Subsidies from the War Service Auxiliary Committee on National Service and Paris Bureau Accounts	\$9,700
Subscriptions at \$3, \$5, \$8 and \$10	18,300
Guarantees and donations	8,900
Total	<hr/> \$36,900

EXPENSES

Editorial and clerical.....	\$11,700
Paper, printing, etc.....	20,200
Miscellaneous office expenses.....	2,500
Distributing, postage and collecting.....	3,400
Total.....	<hr/> \$37,800
Apparent deficit.....	\$ 900
Unpaid subscriptions.....	2,500
Books on hand.....	9,400

At a joint meeting of the Executive Committee of the Alumni Association with representatives of the Committee on the War Record Book last month, it was voted:

That the Alumni Association assume the financial responsibility of the War Record Committee, that its record be accepted and this committee discharged.

The Committee on the War Record Book therefore tenders its final report to the Alumni Council with due recognition of the fact that it has made mistakes, not all of which fortunately will be known by any one person, but with the grateful consciousness that it has been able to carry to completion an important chapter not only in the history of the Institute but of America's share in the Great War.

The committee has only to recommend in conclusion that suitable arrangements be made for publishing additions and corrections to its records from time to time, either in the *TECHNOLOGY REVIEW* or in some other appropriate place.

H. W. TYLER, *Chairman.*

May 22, 1922.

REPORT OF THE ADVISORY COUNCIL ON ATHLETICS FOR THE YEAR 1921-1922

To the M. I. T. Alumni Association:

THE year now drawing to a close has been a very successful one for the various undergraduate athletic activities. Following the policy adopted many years ago, the criterion of success has been the number of men engaged in sport rather than the signally triumphant performance of small winning teams. Athletics for the entire student body has been the goal aimed at, and your council feels that in the year now ending a very definite record of accomplishment may be spread before you. Thirty-one major or minor teams have operated at some time during the year with the total number of young men participating approaching eighteen hundred. In other words, nearly one-half of the entire student body at Technology has spent some time during the year in athletic exercise.

One very outstanding step forward during the past year has been the provision of a permanent home for the rowing interests. Thanks to the generosity of the Corporation of the Institute through its Executive Committee, the Boat Club built some years ago by the Boston Athletic Association on the Cambridge bank of the basin near the Cottage Farm bridge has been purchased outright, and in addition a considerable sum of money is now being expended to remodel the building and render it more fit for our own purposes. While the pursuit of various forms of aquatic exercise will be the chief function of the boat house facilities, the social side will not be ignored and provision is being made for a general assembly room which it is hoped will supplement the somewhat meagre facilities of the Walker Memorial. Rowing at Technology has always existed in large measure through the courtesy and generosity of various organizations, and in the past the Boston Athletic Association, the Harvard Rowing Association, and in more recent years, the Union Boat Club have all contributed most generously toward the furtherance of this wholesome and desirable sport. The generous act of the Corporation for the first time places rowing at Technology on a sound foundation, and it is to be hoped in the years to come that the student body will be able to assist other less fortunate oarsmen as they in turn were helped in the past. Even with the acquirement of the boat house the tale of benefactions is not completed as an alumnus of the Institute, Mr. Henry Morss, has recently presented the Boat Club with a power launch for coaching purposes. The Boat Club is further indebted to the Harvard Rowing Association for the gift of an eight-oar shell which overhauled and with certain minor defects corrected constitutes our best piece of rowing equipment. During the past year nearly two hundred candidates have worked on one of the several crews, and the rowing season has ended

with seven crews actually at work and a total rowing squad of one hundred men.

While the number of victories of the various crews this year has not been a startling one, the policy has been definitely followed of meeting the strongest collegiate crews possible and that the results have been as they are could more or less be expected. The really important thing, however, is that the crews throughout have shown an admirable spirit of clean, plucky sportsmanship and your council is entirely satisfied with the season's record.

The various other sports and activities have been prosecuted with the usual vigor. Our cross country team made an excellent showing in all of its competitions and is recognized as one of the contestants always to be reckoned with in the larger field of intercollegiate athletics. The association football team offers a medium of athletic expression to a considerable group of students of different nationalities. Many of our European and Latin-American students have played this game in their own homes, and the formation of the team at Massachusetts Institute of Technology enables them to continue in a sport wholly desirable. It may be of interest to the council to know that seven nationalities were represented on this year's team, a figure less only than that of last year when eleven nations contributed members to the soccer team. The swimming season has been a successful one from the standpoint of clean, wholesome competition. One particularly pleasant feature of the season was the gift by Mr. Paul D. Sheeline of a handsome challenge cup to be competed for jointly by Yale and Massachusetts Institute of Technology, the first college to score five wins becoming the permanent possessor of the cup. Your council was particularly ready to accept this gift this year as there seemed no possible chance of Technology winning it in the first competition. This optimistic outlook was amply warranted in fact, the Technology team winning only third places in the dual competition and those only because under the rules Yale could enter but two contestants in each event. In amplification, however, it should be said that the Yale swimming team is easily the best college team in the country, and that while the Technology team did not score a single place better than third, the team as a whole gave a most gratifying exhibition of hard competition and clean sportsmanship. The wrestling team has had a most satisfactory season ending with the winning of the championship of the New England Wrestling Association. Boxing, fencing, basket ball have each carried through seasons entirely satisfactory to your council. The rifle team which come under the jurisdiction of the council has done extremely well, and it may be of interest as an index of level of performance that they lost their last match by one point, the Technology team scoring four hundred and ninety-nine out of a possible five hundred, while their competitors made a perfect score. A defeat under these conditions reflects no discredit. The track team, the only sport at the present time on a major basis, has had a very successful in-door and out-door season. The relay team, in the Knights of Columbus games in-doors, ran the

fastest mile made on the Mechanics Hall track since the Boston Athletic Association some years ago established a world's record there. The team tied with Boston College for the New England championship largely because of the excellent balance of the team on one hand and the fine quality of sportsmanship shown by the individual members on the other. To summarize then the general athletic season it may be said that the Technology teams in numbers reporting, in earnestness of purpose, and in sportsmanlike character of performance have made a record wholly satisfactory to your council.

One very pleasant feature of the past season has been the addition to the coaching staff of three volunteers, each one of whom has given freely of his time to the development of a particular team solely for the love of sport and general good will to the student body. Mr. Arthur W. Stevens has undertaken the coaching of the various crews and is doing a most important and valuable work in developing oarsmen in the student body. Mr. George C. Calnan of the United States Navy assigned to Technology has given much assistance to the fencing team, while James R. Allen, also a graduate of Annapolis, coached the basket ball team throughout a most successful season. To these gentlemen for their assistance and courtesy, the Advisory Council and the Alumni Association are equally in debt. But one other point needs to be placed before you. During the past year the student body has received some eight thousand dollars from the student tax, while the operating expense of the several teams has been in round numbers some fifteen thousand dollars. The difference between receipts and expenditures has been made up by subscriptions, gifts and donations from various sources, so that the season ends in a sound financial condition. The Corporation of the Institute has recently generously modified the distribution of the present student tax whereby three dollars per year formerly used to meet operating expenses of the Walker Memorial is now added to the two dollars and fifty cents formerly devoted to athletics. At first glance this would seem to place the athletic finances in a very sound condition, but further analysis shows that the advantage is more apparent than real. The seven thousand dollars derived from outside sources during the past year is all in the nature of temporary income, and there is no guarantee that more than a small part of it will be forthcoming for next year. In other words, the income upon which the students can confidently count for athletics next year is about fifteen thousand dollars, that is to say, the amount which they have expended in the year just concluded. With every recognition of the generosity of the Corporation in assigning these funds to athletics, it is felt that yet other sources of income must be developed to provide, on the one hand, for the continuance of the activities as at present composed, and on the other, for an expansion of these activities and of others germane to them incident to the steady growth of the student body. To render this concrete your Advisory Council wishes to present the following statement which is to be sent out to the secretaries of the several Institute classes as the concluding portion of this report.

Something over a year ago the writer, as secretary-treasurer of the Advisory Council of Athletics at Massachusetts Institute of Technology, placed before the Alumni Council the proposition of requesting classes to contribute annually the sum of fifty dollars to assist in the conduct of the various undergraduate athletic enterprises. The funds at the disposal of the students, even with the utmost economy with which they have always been administered, are inadequate for all needs, and in the opinion of the writer, the alumni, as the controllers of this student activity, were under moral obligation to offer some measure of support.

Through the courtesy of the Alumni Council, several communications have been addressed to the secretaries of the classes. A number of these have replied, and contributions have been made, in accordance with the request. More than half of the classes, however, have failed to respond to this appeal and in many instances have failed to acknowledge any of the communications which have been sent out. With a few of the earlier classes, this is not surprising, as the numbers are few and the members of the classes widely scattered. With the later classes, however, there seems to the writer to be less excuse and decidedly less reason for failure to meet the request. Fifty dollars a year on any class at the Institute would not be a burdensome imposition, as with the classes of smaller numbers the members are in assured positions and in receipt of incomes of appreciable size, while with the newer classes, although their individual earning capacity is naturally less, the numbers of the class make the individual burden a vanishingly small one.

The writer, as graduate secretary-treasurer of the Advisory Council wishes to bring again to the attention of the class secretaries the need of funds for unusual and emergent expenses of the student body in the conduct of their various athletic enterprises. You are requested earnestly, on receipt of this communication, to get in touch with your class, and if possible, contribute the sum of fifty dollars per annum toward the support and upkeep of the student athletics.

A financial statement is appended showing the sums received and the channels of expenditure during the last fifteen months.

In conclusion, the writer wishes to say that while the modification of the student tax, brought about through the generosity of the Corporation, will do much to assist in relieving the greater needs of the Athletic Association, there are still remaining certain extra expenses which can be met most suitably by alumni contributions.

ACCOUNT RENDERED OF ALUMNI ATHLETIC FUND ADMINISTERED BY
THE ADVISORY COUNCIL ON ATHLETICS OF
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

RECEIPTS

Class of '71.....	\$50.00	
Class of '73.....	50.00	
Class of '77.....	50.00	
Class of '78.....	57.00	
Class of '81.....	100.00	
Class of '84.....	50.00	
Class of '89.....	50.00	
Class of '90.....	50.00	
Class of '92.....	50.00	
Class of '93.....	50.00	
Class of '95.....	50.00	
Class of '96.....	50.00	
Class of '97.....	35.00	
Class of '97, second year payment.....	50.00	
A. T. Hopkins, '97.....	42.64	
Class of '01.....	50.00	
Class of '07.....	50.00	
Class of '14.....	50.00	
Class of '15.....	50.00	
Class of '17.....	60.00	
Class of '20.....	35.00	
J. P. Munroe.....	5.00	
G. Gilmore.....	10.00	
E. C. Gere.....	25.00	
New Bedford M. I. T. Association.....	33.00	
		<hr/>
		\$1,152.64

EXPENDITURES

Crew.....	\$200.00	
Wrestling Team.....	56.12	
Rifle Team.....	75.00	
Fencing Team.....	100.00	
T Charm.....	31.00	
Printing, Clerical Service.....	9.00	
M. I. T. A. A.....	4.50	
Eligibility Blanks.....	23.00	
Crew.....	187.00	
Harvard Athletic Association.....	92.00	
Launch.....	50.00	
Track Record Cups.....	81.45	
		<hr/>
		919.07
Cash on Hand.....		<hr/>
		\$223.57

Respectfully submitted

ALLAN WINTER ROWE, *Chairman,*
Advisory Council on Athletics.

ANNUAL REPORT OF THE ALUMNI ADVISORY COUNCIL ON UNDERGRADUATE PUBLICATIONS TO THE ALUMNI COUNCIL OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

THE work of the Advisory Council during the past year has been systematized and regularly conducted, with meetings at least every month, usually attended by student officers of one or more of the publications.

Chief Activities: The Advisory Council has to report a year of unequalled increases in circulation among the publications and generally satisfactory business management, resulting in large surpluses, in spite of the difficulty of getting advertising under present business conditions. Some of the achievements of individual publications which are noted in detail below are beyond what could be expected from the boards, considering the limited time at their disposal and the narrow field from which they can draw for editorial material.

The council has kept in touch with the publications and has noted a steady increase in the disposition of the Boards of Editors to understand the purpose of alumni coöperation and to appreciate its value.

Personnel of the Council: Mr. Alden Waitt and Mr. Paul Leonard were both called away from Boston by business changes. The chairman has held their proxies for the transaction of business through the year. Mr. Waitt has recently handed in his resignation and Mr. Leonard has offered to resign whenever it seems to the council advisable.

Mr. Winward Prescott of the English Department is elected to the council to fill the place of Prof. A. T. Robinson, who retires in June. Mr. Prescott has taken a great interest in the publications and is in particularly close touch with the *Voo Doo*, being one of the honorary members of the Woop-Garoo Society. Through his course in report writing Mr. Prescott has done admirable service to the Institute activities in giving the work of his students last year to the preparation of a report on "Student Activities," made up for use by the Massachusetts Institute of Technology men at the Intercollegiate Conference on Undergraduate Government, and this year to one on "The Proposed Publications Building." Mr. Lobdell's connection with the Institute and with student life through the Dean's office makes him a highly desirable member of the council. Under his chairmanship the work will go forward next year in the lines largely devised and carried out by him during the present year.

The council is proposing, in a separate memorandum attached to this report, (Appendix B, page 406) that its membership be reduced from five to three and that the term of service be increased from five to six years. When the council was first constituted it seemed like a

proposal to get together a rather large body of men who would be available for general advice. As the work has developed, it turns out to demand much more definite control in certain directions than was anticipated. The original scheme of having a committee member in contact with each of the publications is no longer feasible.

The Trust Funds: A statement of the balances in the various trust funds and of the investments and furniture accounts will be found in Appendix A, page 404. At the moment of writing this report it is impossible to say accurately how much these funds will be added to by the outgoing volumes. The books of these volumes are now being audited and their accounts are being brought to a close. It seems probable, however, that we may receive from the *Technique* in the neighborhood of two thousand dollars out of a total profit of about three thousand dollars.

The Tech surplus will be somewhat reduced by bad debts. It may, perhaps, bring the trust fund from six hundred dollars to a thousand dollars.

The Tech Engineering News will have a small surplus — perhaps in the neighborhood of two hundred dollars, but considering that this is the first year of independent financial control, the record of the *Tech Engineering News* business organization might well be considered creditable if the budget were brought through without a deficit.

The *Voo Doo* Trust Fund was established by the outgoing board by a deposit of five hundred dollars from the year's profits.

THE PUBLICATIONS

The Tech:

Volume XLI has just closed its accounts, showing a profit of about one thousand dollars. It was the policy of the board to put the profits back into the development of the paper rather than to accumulate a large surplus, and the result may be looked back upon with considerable satisfaction. The circulation was more than doubled during the year, reaching approximately four thousand. The alumni circulation remained practically the same, in the neighborhood of fifteen hundred. The publication was changed from a bi-weekly to a tri-weekly, a monthly news letter was sent out to the alumni clubs and the staff was increased from thirty-five to one hundred and three. The sporting news was especially featured, a sporting editor was added to the managing board, and practically an independent sporting department was created. The "Lounger" was re-established as a regular feature. Whatever may be said of the type of Lounger articles printed, they were certainly widely read.

During the latter part of the year a history of *The Tech* was compiled from the beginning, and as a feature of this work the career of each past editor was traced up to the present time. This history has not been printed, but a typed copy is being deposited with the Alumni Advisory Council.

In general, the management, editorial policy and general make-up were highly creditable to Mr. Browning and his associates.

The Tech Engineering News:

This publication separated its business management from that of *The Tech* at the beginning of the present year. During the present year the business management has been highly creditable. The circulation and advertising receipts were both doubled. The pages were increased from twenty-four to thirty-six and a cover was added. A system of office organization was established, for which a manual is now being prepared, with production schedules of unit operations and a flow sheet for each department. A number of new publicity methods were used in connection with distribution in the main corridor, including posters and clever mechanical features. Copies have been placed on sale in subway and railway stations about Boston.

The editorial staff has succeeded in getting a surprisingly good class of material, on both technical and human subjects. The general make-up and appearance of the magazine are such as to make it a leader and a model among college technical publications.

Two men were sent to the meeting of the Engineering College Magazines Associated and at the elections Mr. Lobdell was elected Eastern Vice-Chairman of this group. The Engineering College Magazines Associated was in the beginning a coöperative advertising scheme, making possible the securing by separate magazines of high-grade national advertising, which the individual papers could not hope to reach. At present, through the editorial councillor, Mr. C. F. Lyman of the University of Michigan, it is hoped to get syndicated news articles and stories from prominent men.

Volume II of the *Tech Engineering News* closes its year free from debt, with a small surplus to add to the trust fund, and with an organization thoroughly established, policies to hand down to the incoming board and the thorough respect of all who have watched the work of its editors.

The Voo Doo:

The *Voo Doo* has for the first time been placed on a solid business basis. As a result of this reorganization it was possible for the outgoing board to turn over about five hundred dollars for the establishment of a trust fund. The furniture in the office will be taken over in charge of the Advisory Council and a bookkeeping system is being handed on to the present board.

Editorially, the *Voo Doo* has made unusual advances during the year. In circulation it is now exceeded by only one other college comic magazine, and the number printed in the last issue was over five thousand. Some strikingly good issues were put out during the year, notably the Girls' number, which was written entirely by competitors from the women's colleges. The quality of the material is far higher than we have any reason to expect and a good deal of it is work showing real genius. Those who in the past have had reason to complain of the

doubtful taste of some of the issues will find less cause for continuing their criticism against the work of the present board.

The Technique:

Technique 1923 presented a creditable, though not a distinguished book. The work was put through in good order and the financial management was solid. The profits will probably be not much more than three thousand dollars, of which it is expected that two thousand will be turned over to the trust fund.

Technique 1924 is now placing its first contracts. The men on the board appear to show promise that the good standard of the present year will be maintained.

THE PROPOSED PUBLICATIONS BUILDING

The movement for a publications building was forwarded during the past year with the coöperation of the Architectural Department and of Mr. Prescott's course in report writing and with the active interest of Mr. J. C. Patty, the editor of *The Tech Engineering News*. During the first part of the year a contest was run by the Architectural Department for the best design for a Publications Building and a prize of twenty-five dollars was awarded to Mr. J. J. Stanton and Mr. Albert Kruse, whose drawing has since been turned over to the Advisory Council. In the second term of the year, Mr. Prescott assigned a committee from his report writing class to report on the scheme of a Publications Building in conference with the editors of the various publications. The findings of this report seem to show that if the trust funds grow at their present rate, we shall have in about five years a nucleus sufficient to justify an appeal to former editors of publications for financial help to erect a building. It seems likely that the Institute would give the land and would assume charge of maintenance and upkeep.

Respectfully submitted,

ALUMNI ADVISORY COUNCIL ON UNDERGRADUATE PUBLICATIONS,
By A. T. ROBINSON, *Chairman*.

APPENDIX A

The Trust Funds:

		THE TECH	
<i>Investments:</i>	March 20, 1922, — balance.....		\$170.11
	Fourth Liberty Loan $4\frac{1}{4}$	\$1,000.00	
	Fourth Liberty Loan $4\frac{1}{4}$	858.23	
	Commonwealth Edison		
	First Mortgage.....	915.00	2,773.23
			<hr/>
	Promissory Note Vol. 42.....		500.00
	Furniture, depreciated value.....		1,016.86
			<hr/>
	Total.....		\$4,460.20

THE TECH ENGINEERING NEWS

April 20, 1922, balance.....	\$ 354.85
Furniture, depreciated value.....	568.25
Total.....	<u>\$ 923.10</u>

TECHNIQUE

March 31, 1922, balance.....	\$ 348.03
<i>Investments:</i> N. Y. Electric Lighting and Heating \$730.00 Commonwealth Edison First Mortgage.....	915.00
	<u>1,645.00</u>
Furniture, depreciated value.....	336.50
Total.....	<u>\$2,329.53</u>

THE VOO DOO

April 10, 1922, balance.....	\$340.00
Furniture.....	160.00
Total.....	<u>\$500.00</u>

APPENDIX B

MEMORANDUM ON PROPOSED CHANGE IN CONSTITUTION ALUMNI
ADVISORY COUNCIL ON UNDERGRADUATE PUBLICATIONS

The Alumni Advisory Council on Undergraduate Publications is of the opinion that its membership should be reduced from five to three and that the term of service should be extended from five to six years, one member retiring and a new member being elected every two years and not annually as heretofore.

The number of men who are available for this service is limited and there is very little use in putting a man on the committee unless he is closely in touch with the Institute and is available for constant conferences with students. Even if other members are on the committee, all the work is likely to fall on those persons who have offices in the Institute building, the effectiveness of the other members reducing itself to advice on issues with which they have little acquaintance. The care of the trust funds and the checking of the furniture accounts, together with the examination of the financial statements of the various publications, is now a detail job requiring far more attention than the average committee man expects to give to his service on an alumni committee.

In any case, a committee of five is difficult to get together and, if assembled, the number is so large that a good deal of time is almost unavoidably wasted in fruitless discussion.

The Advisory Council on Undergraduate Publications recommends that its Constitution be changed as follows:

Article 4 — Organization:

“Five” to be changed to “Three” and “five years” to “six years,” so that the section reads as follows:

Section 1. Membership: The Advisory Council shall consist of three members chosen by the Alumni Council after a conference with their Special Nominating Committee, and the Executive Committee of the Institute Committee. Membership shall be for a term of six years, one member retiring and a new member being chosen every other year.

Article 5 — Amendment:

“Four-fifths” to be changed to “unanimous.”

Section 1. Amendment: Amendment to this Constitution shall only be made by a unanimous vote of the members of the Advisory Council on Undergraduate Publications, subject to approval by the Institute Committee, and by the Executive Committee of the Alumni Association.

BY-LAWS

3. *Quorum:*

“Three” to be changed to “two,” so that the section reads as follows: Two members of the Advisory Council shall constitute a quorum for the transaction of business.

5. *Amendments:*

“Three-fifths” to be changed to “unanimous,” so that the section reads as follows: These By-Laws shall only be amended by the unanimous vote of the Advisory Council, subject to approval by the Institute Committee and the Executive Committee of the Alumni Association.

2. *Handling of Trust Funds:*

(D) By-Law relating to each trust fund. “Four-fifths” shall be changed to “unanimous” so that the section shall read: Any action in regard to this fund shall require the unanimous affirmative vote of the Alumni Advisory Council on Undergraduate Publications.

(F) “Four-fifths” shall be changed to “unanimous,” so that the section shall read: A unanimous affirmative vote of the Alumni Advisory Council on Undergraduate Publications shall be necessary to effect a change in any by-law pertaining to this Fund.

ANNUAL REPORT OF THE ADVISORY COMMITTEE ON BUDGET AND FINANCE

THE report of the Advisory Committee on Budget and Finance for the year ended follows herewith:

Through representation on the committee appointed to supervise the disbursements of the student tax, in conjunction with the Institute Committee, your committee is able to report, both on the manner in which the activities' budgets are made up and how expenditures under the same are followed up.

The Undergraduates Budget and Finance Committees for the past year were fortunate in having chairmen of exceptional ability, who carried through their work in the manner in which it is defined in the undergraduate constitution. This has not always been the case, and the results this year have been very satisfactory. The budgets were in early, were gone over carefully, cut where necessary and accepted almost *en bloc*.

The Finance Committee chairman reports twenty-nine (29) activities on his list, all of which turned in monthly reports up to April 1 — the end of the student activity year.

Three meetings were held early in the year, and the Undergraduate Finance Committee chairman has conferred with the treasurer of each activity individually on two occasions — also financial reports have been submitted twice during the year.

The chairman of the Undergraduate Finance Committee reports that the budgets have been followed and that the expenditures made have been as scheduled and within the budget figures. He further reports that as far as he knows, no activity will face the new year with unpaid bills of the present year hanging over it. This last is almost too good to be true, but your committee has confidence in this statement, and believes that the work of these undergraduate committees, which has been done this year, will serve as a good precedent for future committees to follow.

Respectfully submitted,

A. R. STUBBS,
S. G. H. FITCH,
H. S. FORD, *Chairman*.

ANNUAL REPORT OF ADVISORY COUNCIL ON TECH SHOW

THE Advisory Board to the Tech Show transmits herewith the report of the management of the Tech Show 1922, the details of which are self-explanatory.

Three Technology performances were given at the Boston Opera-House, April 17 and 18, and the usual two performances on the Northampton trip, April 19. An additional performance at Jordan Hall, April 15, was given under arrangements with Simmons College.

The gross income was \$15,698.94, and expenses \$12,995.14, leaving a net profit of \$2,703.80 for this year's show. The management is especially to be congratulated on this excellent showing, as the gross income was about twenty per cent less than in previous years and this profit is thus the result of reducing production costs and by giving the extra Simmons performance on a fixed fee basis.

The board has approved appropriations from undivided profits as follows:

Adjusted undivided profits, May 1, 1921	\$1,254.88	
Net profit Tech Show 1922	2,703.80	
	<hr/>	\$3,958.68

EXPENDITURES

Banquet	\$506.13	
Miscellaneous gifts:		
Alma Mater	\$50.00	
Walker Activities Plaque	19.00	
M. I. T. A. A. (cup)	10.00	79.00
Tech Show Trust Fund		600.00
Commons Room (balance from 1921)		400.00
M. I. T. Advisory Council on Athletics	1,000.00	
Technology Christian Association	200.00	
Reserve of incidental expenses	173.55	
	<hr/>	\$2,958.68
Undivided profits to Tech Show 1923 (for working capital)		\$1,000.00

Note. Reserve for incidental expenses includes bad accounts and unknown expenses. Any balance goes to 1923 accounts. The accounts have been audited by Patterson, Teele & Dennis.

The Tech Show is a major activity and next to athletics handles more funds and more students than any other student organization. While it was originally started as a means of support for athletics, the change in student conditions in recent years has so broadened its influences, that today its major purpose is to offer opportunities for friend-

ship, acquaintance and a bit of leaven-in-the-loaf to a large number of men.

The scope of this activity, however, must be measured with due regard for the Institute's program and the Advisory Board has definitely taken the stand this past year that the performance of the show shall occur only during authorized suspension of the Institute schedule. The period of junior week has now been settled largely through the coöperative effort of the joint committee of Faculty, Alumni Council and students, and this time being now filled with the usual activities, it appears hardly possible to increase the number of show performances as given at this time. Other performances or trips, if desirable, must probably occur during the intermission between terms in March.

Effort is being directed toward some degree of coöperation with the Architectural and Engineering Departments, and it is gratifying to realize that the management is appreciating that a reasonable scholastic standard of its members is a very desirable trait to foster.

Respectfully submitted,

ALEXANDER MACOMBER,
For the Advisory Board.

May 22, 1922.

REPORT OF THE ADVISORY COMMITTEE ON MUSICAL CLUBS TO THE ALUMNI COUNCIL

MAY 22, 1922

THE season of 1921-1922 has been a most active and successful one from every point of view. Briefly the clubs have played a total of thirty-two concerts, to a total audience of about twelve thousand persons, have travelled a total of about three thousand miles and have handled a total amount of approximately twelve thousand dollars. The concerts have been of a high order of excellence, both from the standpoint of musical quality and entertainment and reports from various quarters go to show that the trips of the musical clubs are doing much to dispel the old idea that the Technology student is at all times only a dull grind with none of the social graces and culture so necessary to the making of a broad gauged engineer. The detailed record of the season is as follows:

Organization and Policy. A considerable amount of reorganization in the division of management is one of the outstanding features of the year. As the situation now stands there is a general manager and under him three departments, business, stage and publicity, each with its manager and staff of assistants. The general manager is usually a senior and the departmental managers are in general selected from the junior class. Sophomore and freshman assistants are included in the scheme of organization, so that the work of administration is well divided. The line of promotion is evident and logical, and as a result of this the competition for junior managers and general manager is keen and serves to keep all the members of the management actively at work.

The general policy of the clubs has been a continuation and natural development of that of the last season. Effort has first been centered on the development of an organization which would work together to present a program of real merit which would compare favorably with the best efforts of other college musical clubs. The members have all worked hard to accomplish this end and in so doing have developed a most excellent *esprit de corps* which has helped to make this somewhat strenuous season a most successful one. The fact that the clubs must work for the benefit of the college and not merely for the individuals has been continually emphasized and the results so obtained have been effective.

Personnel. An exceptionally large number of candidates entered the competitions for positions on the clubs, about two hundred and fifty in all. The personnel of the clubs as finally developed was as follows: Glee Club, twenty-four; Mandolin Club, eighteen; Banjo Club, fourteen; Specialties, twelve, and Management, fifteen. The

personnel is somewhat restricted at present, on account of the necessity of limiting the number of men who make the trip to the accommodations provided by a single Pullman sleeping car. By taking on the trip mostly men who play on two clubs, or who appear in a specialty act and as a member of one or the other clubs, it is possible however, to put on the three major groups each with sufficient numbers to produce a good effect.

Concerts. A total of thirty-two concerts was given during the past season most of which were in greater Boston or other points in eastern Massachusetts. During the Christmas holidays, however, a trip was made and concerts given at Rochester, N. Y., Cleveland and Akron, Ohio; Chicago and Rockford, Ill., and Schenectady, N. Y. From the standpoint of the club members, this trip was the outstanding feature of the season. Reports from these places were most encouraging in that the concerts were of unusual excellence and the deportment of the men was such as to be a source of gratification to our patrons and supporters.

Three concerts were held for the Institute undergraduates; a trip concert prior to and for the purpose of providing funds for the trip; the winter concert which was held at the Copley Plaza Hotel on January 28; and the spring concert, the first official event of junior week, held at the Somerset, on April 17.

The Choral Society. The musical clubs have acted as sponsor for a new musical activity known as the Technology Choral Society, in the formation and support of which the alumni in and around Boston have been asked to participate. The question was first broached shortly after the close of last year's season and at a conference of the Advisory Board and the general manager of the clubs it was decided to give the matter a thorough tryout. A circular letter was mailed during the latter part of the summer vacation to all students who were known to be interested in music and when college opened the matter was still further advertised by means of posters and articles in the *Tech*. Alumni were circularized from the alumni office and asked to participate. The response from these sources was not overwhelmingly large, but, nevertheless, an organization was formed and rehearsals held throughout the year.

The first concert of this society was held in Walker Memorial on April 27, in conjunction with the Technology Glee Club. This was advertised through a circular for the alumni office addressed to "Alumni and Friends of Technology in and about Boston" as well as through the regular undergraduate channels. The concert was of a high order of merit but both alumni and student support was disappointing. Although a financial burden so far the musical clubs' management is anxious to help the society during the coming season in the hope that it may expand into a self-supporting and useful activity.

Financial Status. The treasurer's report is not yet available but, in spite of the heavy expenses of the Chicago trip, it is expected to end the season with a small credit balance. In connection with finances it

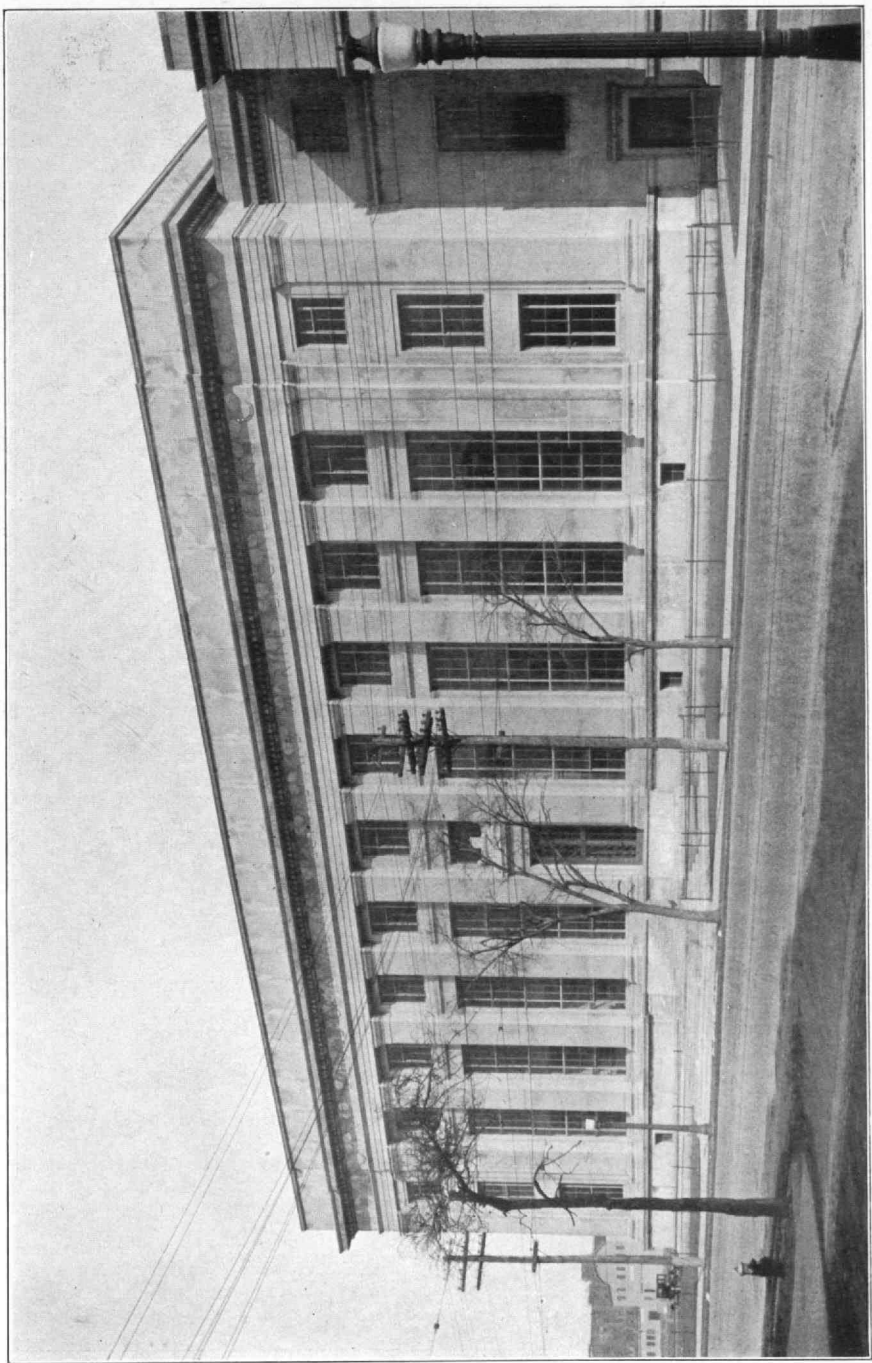
may be added that this year it is expected to institute the custom of having an annual audit of the books by some firm of certified public accountants.

Recommendations. Attention of the Alumni Council is respectfully drawn to the lack of local alumni interest in undergraduate musical affairs which was so clearly indicated by the attendance at the recent Choral Society concert. The Advisory Committee feel that the musical clubs afford a natural means of contact between the alumni and undergraduates which is at present not utilized.

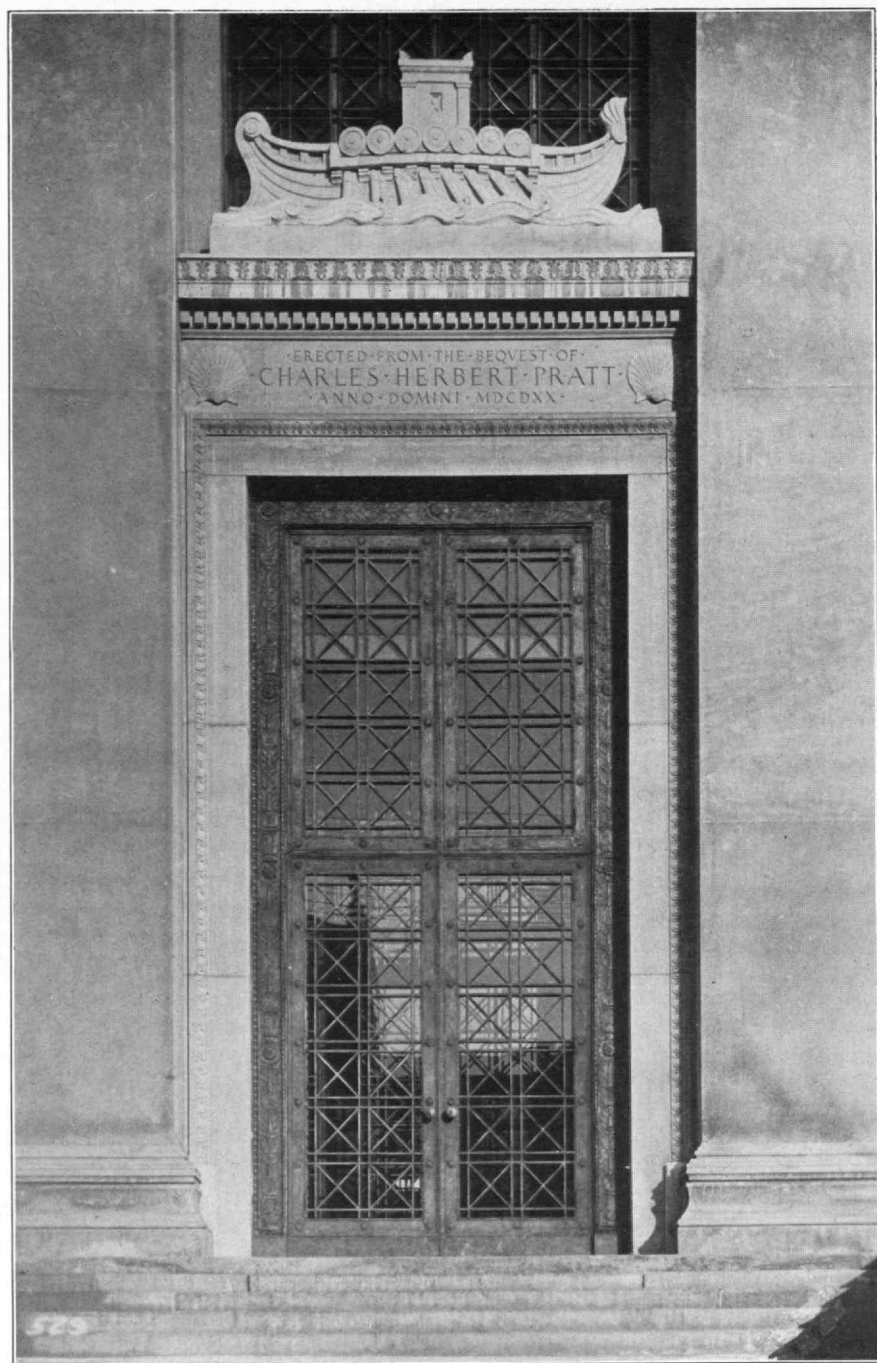
The clubs would like to have the local alumni know what they are doing and would appreciate the privilege of providing the music for alumni gatherings such as the annual dinner. The musical clubs are as fully qualified to do this as any band which can be obtained and it is believed that the local alumni will be glad of this opportunity of keeping in contact with undergraduate affairs. You really do not know how Tech songs should be sung until you hear our Glee Club.

Respectfully submitted,

EDWARD E. BUGBEE, *Chairman,*
Advisory Council on Musical Clubs.



THE NEW PRATT MEMORIAL, DEVOTED TO NAVAL ARCHITECTURE



THE DECORATED DOORWAY OF THE PRATT MEMORIAL WING

APRIL MEETING OF THE COUNCIL

The ninetieth meeting of the council was held in the Walker Memorial on Monday evening, April seventeenth. The following were elected members of the Alumni Advisory Councils on Undergraduate Activities: Dr. John A. Rockwell, '96, Harrison P. Eddy, Jr., '17, athletics; W. Prescott (Faculty), undergraduate publications; Alexander Macomber, '07, Tech Show; H. S. Ford (Bursar), budget and finance committees; O. B. Denison, '11, Walker Memorial; Prof. H. G. Pearson (Faculty), Musical Clubs.

Mr. Alexis Wiren, a graduate of Course XIII, spoke to the council on the establishment of a Rotating Scholarship for Russian students at Technology. There are at present twelve such students doing excellent work and he suggested that some arrangement be made for scholarships for even more Russian students. The matter was referred to a special committee.

Upon the proposal of President Little, the question of Honorary Fellowships at Technology was discussed. He explained that Technology has never awarded Honorary Degrees. It was suggested that there might be some advantages to the Institute in interesting certain leaders of industry, men of Tech timber and men of our own type, by making them Honorary Fellows of the Massachusetts Institute of Technology.

Mr. Morss, Treasurer of the Institute, told the council that this was not a new problem for the Corporation and suggested that the council should investigate the matter and make report upon it. The council voted to appoint a special committee. The president appointed Mr. James P. Monroe, chairman, and Messrs. Little and Carlson, and Professors Tyler and Goodwin, as members of the committee. This committee would welcome the result of discussions at meetings of local associations.

A member of the senior class was present and proposed to the council that the old Pop Concert be re-established and that moving pictures be taken of Class Day and Commencement Day exercises. The council appointed a special committee to consider these proposals with the senior class and to report at the next meeting.

DEAN TALBOT VISITS OHIO ALUMNI

ON May 18, Dean Henry P. Talbot, '85, addressed the Technology Club of Northern Ohio at the University Club. His message had as its purpose the bringing of Institute news to the gathering and to acquaint them with the changes which have been made during the past year in the Institute personnel. In speaking of a new President for Technology, he stated that as yet there was no news as to who he might be, and that as far as he knew no definite group had been chosen from which the final selection could be made. He urgently solicited the members of the club present to submit names of men they believe are the ones for the position, saying that suggestions would always be acceptable to the committee which is to make the final choice.

He paid tribute to the men recently lost to the Institute Faculty and made the reassuring statement that recent acquisitions are doing much to fill the vacancies. When asked if there is to be a policy of limiting the number of students attending the Institute he answered that there were no such plans at present, and that a smaller enrollment is to be looked for next year, due to the large graduating class of eight hundred, and with possibly six hundred entering next fall.

In regard to inferences as to the tendency of the Institute to become a graduate school, he said that there was no indication of a leaning in that direction at present, but that the real problem lay "how to do better for better men." He felt that the present system of education tends to pay too much attention to mediocrity, but ought to do more for the man who has it in him to get ahead without such attention, and that there are too many prods and pushes in the system of today.

Among other things, he spoke of the study that is being made by Mr. Everett Morss, '85, Treasurer of the Corporation, and Mr. H. S. Ford, Bursar, of the cost of education at Technology. In speaking of the Division of Industrial Cooperation and Research he stated that in renewing the existing contracts a more definite basis would be taken so that the field of research for each might be more clearly defined.

THE N. H. TECH CLUB OUTING

E. W. Rollins fund for development of rowing

EIGHTY-NINE members and guests of the Technology Club of New Hampshire from all parts of New England gathered at Three Rivers Farm, Dover, N. H., on Sunday, June 25 as the guests of the president, Mr. E. W. Rollins, '71. During the meeting which followed the clambake it was voted that the money which has been raised under the plan for perpetuating the memory of President Maclaurin, proposed at the meeting of the Club held two years ago, be turned over to the Advisory Council on Athletics to be known as the E. W. Rollins Fund for the Development of Rowing. The amount of this fund as paid to Bursar H. S. Ford, who acted as treasurer, is at the present time \$1526. An extra provision was made that those members who had contributed and who were not present be asked whether they had objections to this new application of their money, and also that those who had promised to contribute and had not paid up to the present time be asked if they would forward their subscription for this use, thus making the fund total in the neighborhood of thirty-five hundred dollars, if all were agreeable.

Upon the arrival of the guests who were somewhat delayed owing to the inclement weather in the morning, a buffet lunch was served, and the baseball game followed in due order according to the usual custom, it being marred by the extreme impartiality of the umpire. After the ball game a lobster and clam dinner was served in the pine grove.

J. W. Rollins, '78, as toastmaster, introduced Mayor Charles C. Waldron of Dover, who extended an official welcome to the members and guests. He was followed by H. J. Carlson, '92, the incoming president of the Alumni Association, who talked of several of the problems facing the Institute at the present time; that of a new president being most urgent and cardinal in its nature. Prof. R. H. Richards, '68, told an interesting story of a "salted" gold mine in the vicinity of Three Rivers Farm which had come to his attention some years ago.

Mr. Rollins then introduced I. W. Litchfield, '85, to whom he paid tribute as an organizer and poet and stated that during the ball game Mr. Litchfield had prepared a poem which he would read. In responding "Ike" thanked the toastmaster for his "clamful hospitality" and greatly praised the work of "Alexander the Great, Chief Commissary." He then referred to some of the work of the Alumni Association, making particular reference to its aid in bringing about the establishment of a course in Engineering Administration and of the campaign for state aid which he said was successful principally on account of the efforts of the toastmaster who had been chairman of the committee. Denying that he had prepared the poem during the ball game, he stated that on

the contrary he had been working on it for the entire past year. The hearty reception accorded his reading of it entitles it to reproduction here:

This radio we hear about
Is going to do — they say —
'Most everything, from curing warts
To getting in the hay.
It's going to mend our other shirt,
It's going to cure our ills;
We turn the pointer four degrees,
And it will pay our bills.

You catch a ray and bottle it
So that it really stays in,
You have your yeast-cake ready,
Uncork, and put the rays in!
You turn it on your motor
If a cylinder is missing;
They even hope to make it do
The drudgery of kissing!

They talk as though 'twas something new
And marvel much about it,
But we know 'twas invented here,
Not one of us can doubt it.
"Dad" wrote the invitation out
And then, before he sent it
He just crocheted a radio,
And wireless was invented!

Its subtle influence reaches us
Wherever we may be,
On sea or land, boiled, stewed or canned,
In jail, or roaming free;
We burst our bonds and hasten to
This place of cheer and charm
Lured by the cordial broadcast
From Triune Rivers Farm.

So here we are, Dad Rollins,
Our receiver's on the blink,
Our vacuum tubes and hearts are full
And we can only think.
It's hard to put our thoughts in words,
We're sorry to confess it,
But you're the Topside High Boy,
And your radio — God bless it!

Following Mr. Litchfield, Mr. R. A. Hale, '77, secretary of the Technology Club of Merrimack Valley, was introduced as the "warhorse of the Merrimack." He referred to Professor Richards' remarks on "gold bricks" and cited the proposed tide mills to be erected on the Merrimack River as another instance where the engineer could be of public service in exposing fraud. He was followed by N. S. Bean, '94, of Manchester, vice-president of the Technology Club of New Hampshire, Henry A. Morss, '93, assistant treasurer of the Institute; J. A. Warren, '91, secretary of the Technology Association of Maine, and Prof. S. C. Prescott, '94, head of the Department of Biology and Public Health at the Institute.

Mr. E. W. Rollins then read a letter expressing the regret of Dr. Elihu Thomson that he was unable to be present, and requested that Mr. W. D. Davol, '06 read a letter from Dr. Allan W. Rowe, '01, secretary of the Advisory Council on Athletics, speaking of the need for assistance in the matter of rowing. Mr. Rollins then proposed that the money be devoted to assisting in filling this need and in the course of the discussion it was brought out that the objections of the Institute authorities to naming an athletic field as a memorial to Dr. MacLaurin was that they feared that such a field might not be of a permanent enough nature and the examples of Jarvis and Hunt fields at Harvard were noted. Many members lauded the work of Dr. Rowe and the Advisory Council. Professor Richards stated that he was considering the establishment of a cup in memory of his brother who had made one of the greatest, if not the greatest, rowing records at Trinity College, England, and that in looking over the possible places he had been most favorably inclined to donate such a cup to be competed for intramurally at Technology. It was then moved and unanimously carried that it be the sentiment of the meeting that the money form the E. W. Rollins Fund for the Development of Rowing.

A list of the alumni present follows: R. H. Richards, '68, E. W. Rollins, '71, C. A. Judkins, '71, John C. Chase, '74, S. L. Flanders, '74, R. A. Hale, '77, J. W. Rollins, '78, I. W. Litchfield, '85, Joseph A. Warren, '91, H. J. Carlson, '92, Henry A. Morss, '93, Walter H. Norris, '93, N. S. Bean, '94, Allen A. Claffin, '94, E. M. Hunt, '94, Samuel C. Prescott, '94, Charles W. Bradlee, '97, William A. Grover, '97, Hugh K. Moore, '97, M. T. Robinson, '97, G. W. Treat, '98, N. E. Seavey, '99, H. D. Learnard, '00, F. S. Bradley, '05, W. G. Eichler, '05, Andrew Fisher, '05, R. L. Young, '05, Walter D. Davol, '06, K. E. Terry, '06, Carl A. Hall, '08, Paul H. Pearson, '11, Guy A. Swenson, '13, Leigh S. Hall, '14, N. C. MacKenzie, '14, W. M. Africa, '15, H. E. Lobdell '17, L. M. Emerson, '22, H. S. Ford, Bursar.

ROBERT HALLOWELL RICHARDS, '68

By W. SPENCER HUTCHINSON, '92

ROBERT HALLOWELL RICHARDS, although retired from the work of teaching at the Massachusetts Institute of Technology, is now, in his seventy-eighth year, still active in the practice of his profession, particularly as an expert in patent cases involving the principles of ore dressing, of which he is the world's best-known authority. He is daily at his office and almost every week finds him either in New York or even farther afield. One morning not long ago, I dropped into his office and he had a thick package of photographs to show me. These represented a unique and successful attempt to record the origin and behavior of flotation bubbles under varying conditions. The result was as illuminating and convincing as is his photographic series of the development of the elm tree buds. In the afternoons he is found in his library at his home and here is the atmosphere of a busy man's office, where Professor Richards finds the days too short to accomplish all the tasks he has set himself to do. His play time is no longer taken up with tennis, which, however, he kept up until he was sixty-nine, or by rowing which he gave up earlier, but he continues his morning walks around Jamaica Pond and continues his live interest in birds and other living things.

Professor Richards was born August 26, 1844, at Gardiner, Maine, in the old stone house called "Oaklands," which was built by Robert Hallowell Gardiner, his grandfather. He was one of five brothers and his forebears include the names of Jones, Tudor, Gardiner, and Hallowell. Among these are judges and doctors, men of learning, all of them. He spent his boyhood at Gardiner, at his grandfather's house, called "The Cove" until thirteen years of age, when he went to England to school. During five years there he attended four different schools, the last Wellington College, where he spent two years. During one fortunate year he was under a teacher named Dakyn, who discovered and developed his love of nature. Wellington College, when he entered it, was only recently founded, situated in Surrey, between Southampton and London, and only two miles from Cæsar's Camp, in a land of heather and pine forests. It was a region in which he took great delight in walks and excursions through the country.

Returning to America in 1862, he studied under private tutors and then went to Exeter for two years, with the idea of preparing for Harvard, but he did not understand "a single thing of his Latin and Greek" and did not feel that he knew what he was about in his school work. In 1865 his mother wrote him that William Barton Rogers was starting a scientific school in Boston, in which connection, it is an interesting fact that his mother was distantly related to Mrs. Rogers.

He did not hesitate a single day in deciding to come to Boston and enter Technology, and here he found school a thing of delight instead of a dull monotonous grind. The new Massachusetts Institute of Technology went into the Rogers Building on Boylston Street in January, 1866, and there they had their first chemical laboratories, and began work with the proof sheets of Elliot and Storer's book.

Young Richards entered the course of mechanical engineering, but after a few weeks changed over to the course in mining engineering. He was particularly keen about chemistry. During the summer of 1867 he joined the United States Coast and Geodetic Survey and worked on the Penobscot River as aide, and later in the same summer spent a month on the Kennebec River on surveys, the purpose of which was the improvement of the river for navigation, with particular attention given to the accumulations of waste from the saw mills which had choked the channels. He recalls the early days of the Institute with particular appreciation of the inspiration and enthusiasm of President Rogers. The instruction in chemistry was equal to the best, but that in mathematics was wretched. At this time there were no laboratories of mining and metallurgy either at the Institute or at any other school in the world. The nearest approach to metallurgical appliances were a single-assay muffle and a little crucible furnace.

After graduation, Richards became assistant in General Chemistry. In 1869 he was made instructor in Assaying and Qualitative Analysis, in 1870 assistant professor of Analytical Chemistry, in 1871 professor of Mining and Assaying, in charge of the mining and metallurgical laboratory, and in 1873 professor of Mining Engineering in charge of the mining and metallurgical laboratory. From this time until he retired as professor emeritus in 1914, he was head of the Department of Mining Engineering and one of the staunchest members of the Faculty, of which he was secretary for five years, beginning in 1878.

In 1875, Professor Richards married Ellen Henrietta Swallow and after her death he married Lillian Jameson in 1912. Among the honors which have come to him in his profession, the following are mentioned here: He was president of the American Institute of Mining and Metallurgical Engineers in 1886, after having served as vice-president in 1879 and 1880, and was elected to honorary membership in 1911. The degree of LL.D. was conferred upon him in 1909 by the University of Missouri, and in 1915 he was awarded the Gold Medal of the Mining and Metallurgical Society of America for distinguished services in the advancement of the art of ore dressing.

The remarkable qualities of the teacher are shown in Professor Richards, known affectionately among the students, as "Bobby," by the following quotation from one of his former students, who was afterwards engaged as an assistant in the preparation of his great work on ore dressing.

"I marvel more and more at the wonderful resources of this man. He is whole-souled, generous, broad-minded; he has the fine faculty of listening to a man until he is through talking, although the man may

be telling what he already knows, or what he knows is false or absurd. His methods of attack are excellent, and laying-out methods of work help him greatly. He grasps the situation quickly if presented graphically, but he is a very slow reader."

Professor Richards says that his chief inspiration came from President Rogers and Professor Storer and from Hugh Miller's book "My Schools and Schoolmasters." He was never much interested in discussing the details of what a mining engineer should study but he holds that principles should be taught and if they are thoroughly taught, then the student is prepared, upon graduation, to undertake, after due practical experience, the successful solution of any problem in his profession.

The Mining and Metallurgical Laboratory came into existence in 1872. To Richards, then assistant professor of Analytical Chemistry, was assigned the duty of creating the laboratory, although it was to the inspiration of President Rogers that the idea owed its inception. President Runkle made a trip west over the newly completed Union Pacific Railway in 1870 and visited many mining and metallurgical plants. This trip was followed the next summer by an excursion, headed by Runkle, made up of five members of the instructing staff, including Richards, and fifteen members of the student body. On this trip there were visited the iron mines in Missouri, the mining towns of Golden, Black Hawk, Central City, Georgetown, and Idaho Springs in Colorado. There the party divided and Richards went with Ned Rollins on a side trip to the Laramie plains in Wyoming. The remainder of the party continued with Runkle to Salt Lake, Utah, and Gold Hill and Virginia City, Nevada, thence to Grass Valley and San Francisco in California. While on this trip the arrangements were made for the purchase of machinery for the mining laboratory. President Runkle left Bradford H. Locke, a student in the fourth year class, at Grass Valley, and Charles O. Parsons, a student in the third year, at Virginia City, to work in the mills at those places and to return later to help Richards in founding the laboratory.

Meanwhile, Richards, upon his return to the East, went abroad and visited the famous German mining schools at Freiberg and Clausthal and the concentrating mills near by. At these places he found German students working in the mills two weeks at a time. They visited the concentrators and looked on, but had no opportunity to try things for themselves or to get the experience which is gained by putting the machine out of adjustment and then bringing it back. His observations here convinced him more than ever of the importance of laboratory equipment for teaching purposes and in planning the new laboratories he avoided the German method and developed the entirely new "Technology" idea. Richards went abroad again in 1876 and on that trip visited the tin mines and concentrating mills in Cornwall, England, the lead districts in Scotland and North Wales, and the lead mines and concentrators at Mechnich, Germany.

These were the historic incidents in the creation of the first labora-

tory of mining and metallurgy of its sort in the world, an enterprise which antedated any other of its kind in the United States by ten years. An early catalogue gives the following information regarding it: "The mining laboratory contains a fifteen-horse-power engine, a five-stamp battery of the form in use in Colorado and on the Pacific Coast, an amalgamating pan, settler, and concentrator of the kind used in the Washoe process in California and Nevada, for the treatment of silver and gold ores, a Blake crusher, a Whelpley and Storer pulverizer, a Rittinger automatic shaking-table, a hand-jigger, a Freiberg shaking-table, and a Sturtevant pressure-blower. The metallurgical laboratory contains blast and reverberatory smelting furnaces, a roasting furnace, a furnace for cupellation, furnaces for fusion, and crucible and muffle assay furnaces."

This is the beginning from which the present laboratories of both ore dressing and metallurgy were developed. The fundamental idea which differed from anything which had heretofore been done was to combine in the machines and furnaces: size which would match full-scale machines in the quality and character of their work, usefulness secured by modification of the machines so that the weighing and counting of products was strictly possible, adaptation to teaching, whereby it was possible to operate the machines under different conditions with changes subject to the will of the student, adaptation to research or testing. In this latter division it is to be remarked that a great amount of research has always been done by Professor Richards in these laboratories, not alone because of the service he was able to render the profession, but for the dignity thereby lent to the work of the student. In all this he has set the work of teaching first, as expressed in the rule that "the student has the right of way."

It was in 1893 that R. P. Rothwell, then editor of the *Engineering and Mining Journal*, called on Professor Richards and asked him to write a book on ore dressing. Richards thought a year to experiment, a year to visit the plants, and a year to write the book would see the undertaking finished. Rothwell wanted it in four months. But Richards found that there was so much which he did not know and which nobody else knew, that he began experimenting concurrently with the searching of literature and in 1895 he set out to visit mills and, accompanied by secretaries, he made an extended trip through Michigan, Missouri, Colorado, Montana, and California. He was wonderfully fitted and equipped by experience to do this work. The development of the experimental laboratories, the early years spent in solving elementary problems, and the later years in fixing the fundamentals of research which he expressed in the formula, "observe, record, collate, conclude," prepared him for the work he now was undertaking.

In the mills he found so much divergence in practice disclosed, even in the same district, that he found it impossible to adopt any rule and therefore described everything as he found it. Many questions arose as to the practise and a series of investigations were undertaken by Professor Richards and his assistants to find answers.

The first two volumes of the treatise on ore dressing took ten years and were published in 1903. The development of the art of ore dressing was rapid at this time and notable improvements were made by the invention of new machines. In 1905, Professor Richards started to write an appendix and when he had finished in 1909, he had two more volumes as large as the first two. Thus, ore dressing comprises four volumes and runs into more than two thousand pages, with 640 tables and 860 drawings. This work entailed an actual cash expenditure, out of Professor Richards' own pocket, amounting to \$20,000, without counting any of his own time. The Textbook of Ore Dressing, prepared for school use and published in a single volume, was written concurrently with the preparation of the last two volumes of the treatise and it was also published in 1909.

At the annual meeting of the Mining and Metallurgical Society of America in January, 1915, the award of the Gold Medal of the Society to Professor Richards in recognition of his services in the advancement of the art of ore dressing was announced. The presentation of the medal took place a few weeks later.

The *Engineering and Mining Journal* comments editorially upon this event as follows: "Professor Richards was the first to create the system of mining and metallurgical instruction with the aid of a laboratory, equipped with working machines, wherein the students were taught to execute the lessons of the lecture-room; and thus blazed a trail in technical education which other teachers were glad to follow, which now they have converted into a broad, well-marked road. For this, if for nothing else, Professor Richards is entitled to the thanks of the profession.

"But in the specialty that he has made his own — ore dressing, or the mechanical concentration of ores — he has rendered service of equally altruistic character but far broader scope. He has been a developer of principles in an art that was destined to become the premier in importance, a codifier of its rules, and the exponent of both theory and practice in a field that was practically uncharted. His monumental treatise on ore dressing was not only the first in the English language, but for many years it was the only one and is still the principal one.

"Professor Richards has been essentially a teacher, but he has been able to put his teachings into practice and has invented two noteworthy machines — the Richards pulsator and the Richards jig — which have come extensively into use. It is sincerely to be hoped that Professor Richards will reap a larger material reward from these valuable inventions than yet he has gained. But throughout his life his personal interests have ever been subordinated to those of his work as a teacher and as a guider of men. To such leaders come rewards of a kind that money cannot buy."

The name of Robert Hallowell Richards is known wherever men hoist crude ore out of the mines and dump it into mill bins. He possesses a thousand disciples among the men trained under his guidance and from him they learned not only things mining and metallurgical, to which

he gave so much enthusiasm, but all those fine qualities of character, his rugged simplicity, his generosity and kindness. We salute him, guide, philosopher and friend! May he live long and find continued joy in the love and esteem of a host of loyal friends!

H. G. BORDEN, '14, STATE DIRECTOR OF LABOR

Recent winner in Edison test questionnaire

HOWARD GRANVILLE BORDEN, '14, of Hollywood Avenue, East Orange, has been appointed Director of Labor, Industry, and Administration of the State Department of Institutions and Agencies, upon the recommendation of B. G. Lewis, the present commissioner. His appointment is temporary, pending a civil service examination. He was selected from seven hundred trained and experienced executives.

Mr. Borden is a graduate of Course I and was once in the employ of John A. Stevens, as power plant engineer. Several months ago he obtained employment at the Edison plant in Orange by answering successfully the Edison questionnaire.

GRADUATES OF 1922

NOTICE: This number of the REVIEW is being sent to graduates, who, by virtue of their degree, are members of the Alumni Association. Their first quarterly dues, \$3, are due in January for the year 1923 and should be sent to Walter Humphreys, secretary. However, all those who send in their dues at once will receive the REVIEW for the balance of the year free, the dues being credited to the year 1923. Non-graduates may become regular members of the Alumni Association by applying for membership on the blank which will be sent them and by sending \$3 to Walter Humphreys, secretary. Those who apply now will receive the REVIEW free until January 1; the \$3 pays for dues and subscription to the REVIEW for 1923. In order to be sure of the REVIEW send in your \$3 now and ask for a membership application blank.

The following received the Degree of Doctor of Philosophy:

Banta, C.	Joubert, J. M.
Gatewood, Miss E. S.	Youtz, M. A.
Hurst, M. E.	

The following received the Degree of Doctor of Science:

MacDill, L.	Prasad, R.
Manneback, C. L.	

The following received the Degree of Master in Architecture:

Brown, E.	*Dennison, H. T.
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The following received the Degree of Master of Science:

Adams, B. F.	Diechmann, G. H.
Adams, F. W.	Duffill, H. P.
Allen, J. R.	Edmonds, W. J.
Anderson, W. W.	Elmer, L. A.
Arthur, J. B.	English, E. F.
Bass, P. B.	Entwistle, J. L.
*Bowles, E. L.	Eskew, R. K.
Boyd, W. W.	Evans, L.
Breed, C. A.	Fergusson, W.
†Buckner, L. O.	Fife, W. M.
†Burkett, D. M.	†Fisher, R. C.
†Cake, H. H.	Frazer, W. R.
Calvert, A.	*Frost, T. H.
Carpenter, C. B.	Gartland, J. W.
Chambers, I. F.	Genaske, A. S.
Chand, M.	Gilardi, A. J.
†Chatham, C. L.	†Gilbert, R. H.
†Chilcott, E. R.	Greene, C. D.
†Chu, S. P.	*Greenfield, G. J.
Chutter, G. A.	Gregory, D. V.
Clark, Miss F. H.	Griffith, P. W.
Clark, R. S.	Hains, P. W.
Clarke, P. S.	†Hartley, M. A.
†Coffin, P. T.	Harvey, T. F.
Cushman, C. H.	Hawes, W. L.
Davies, H. F.	Houston, A. J. R.
DeBack, E. E.	Howard, C. W.

*Awarded their degrees January 4, 1922.

†Awarded S.B. as of Class of 1921.

- Huggins, F. E., Jr.
 Ingram, W. H.
 †Jackson, D. C., Jr.
 *Kavasji, M. J.
 †Kenrick, G. W.
 Kiernan, J. E.
 Kingham, J. R.
 Kirkpatrick, A. N.
 Lee, J. G.
 Lo, J. A.
 †Longfellow, C. F., Jr.
 McCullough, C. R.
 McMullen, R. B., Jr.
 Maxwell, J. R., Jr.
 †Matthews, W. R.
 Mead, B.
 *Merrill, P. C.
 Miller, W. H.
 Miller, W. J.
 Morgan, P. A.
 Morrell, J. C.
 Myers, H. M.
 Neitzke, O. F.
 Nichols, W. R.
 Nicholson, C. A.
 †Nock, H. K.
 Orlinger, A. A.
 †Owens, G. F. B.
 Paige, J. W.
 Parkhurst, R. B.
 Parsons, I. H.
 Pitman, A. L.
 Plummer, W. B.
 †Price, X. H.
 Reeder, J. C.
 Rice, L. M.
 *Ronneberg, C. E.
 Rood, A. C.
 †Rose, E. L.
 †Ross, W. S.
 Rudow, E. W.
 Rush, R. M.
 St. Laurent, R. A.
 Salomon, M. S.
 †Scott, J. A.
 †Seddon, J.
 †Shaw, R. M., Jr.
 Shih, K.
 Shoemaker, J. M.
 Silverstein, S. M.
 Sitz, W. H.
 †Smith, J. B.
 Smith, W. T.
 Spratley, J. B.
 Stevens, L. C.
 *Stewart, C. C.
 Stose, H. F.
 *Takeuchi, K.
 Tattersfield, G.
 Thomson, G.
 Van Ness, B., Jr.
 Waldschmidt, W. A.
 Wang, Chou C.
 Watt, G. A.
 Wells, F. H.
 †Westen, R. S.
 Whelan, F. H. E.
 Whitworth, F. T.
 Wiener, Miss B. S.
 Wildes, K. L.
 Williams, C. A.
 †Witherow, H. M.
 †Wood, A. R.
 †Woodbury, D. O.
 Woodruff, L. F.
 Woodward, M. P.
 Wylde, E. P.
 Wynkoop, T. P., Jr.

The following received the Degree of Bachelor of Science:

- Aaron, H. R.
 Abboud, A.
 Abrahams, D. J.
 *Addicks, A. D.
 Albert, R. L.
 Albrecht, H. O.
 Alden, P. M.
 Alder, T. W.
 Alland, A. B.
 Allee, H. D.
 Allen, E. J.
 Allen, J. H.
 Almy, Miss M.
 Alpert, M. L.
 *Andersen, A. G. H.
 Anderson, G. P.
 Anderson, P. N.
 Appel, P. D.
 Archibald, J. W. D.
 Aronson, J. C.
 Artola, L. A.
 Arzoomanian, S.
 Ash, E. A.
 Ayulo, F. P.
 Bainbridge, W. W., Jr.
 †Baish, C. F.
 Baker, C. H.
 Baker, E. H.
 Baker, J. S.
 *Baldwin, H. duP.
 Baldwin, H. F.
 Baldwin, R. S.
 Ballentine, R. J.
 Balyozian, J. J.
 Banks, F. M.
 Barnes, G. H., Jr.

- Barrett, W. F.
 †Bartlett, B. W.
 *Barton, C. B., Jr.
 Bauer, M. M.
 Baumann, R. C.
 Bawden, G.
 Beatty, F. E., Jr.
 *Becker, J. H.
 *Beeche, G. A.
 Benedict, P. C.
 Bennett, A. L.
 Benson, C. A.
 Berlage, T. N.
 Bernard, K.
 Berry, H. O.
 Bigelow, E. E.
 Bixler, D. F.
 Black, R. D.
 Blackall, F. S., Jr.
 *Blake, A. H.
 Blanchard, C. F.
 Blatter, R. H.
 Blood, L. T.
 Bloom, M. C.
 Boggs, L. A.
 Boli, G. T.
 Bon, H. M.
 *Bond, C. L.
 Bonfils, F. W.
 Booth, E. W.
 Borchgrevink, F.
 Borucov, E.
 Botting, L. P.
 Bovey, W. H., Jr.
 Bowers, J. A.
 Bradley, M. B.
 Braestrup, C. B.
 Bray, C. C.
 Briggs, F. B.
 Brockett, C. P.
 Brokaw, C. E.
 Brown, B. J.
 Brown, D. A., Jr.
 Brown, H. E.
 Brown, R. H.
 *Brown, W. W.
 Browning, A. J.
 Bryden, C. W.
 *Buckner, L. O.
 Buell, R. C.
 *Buckett, D. M.
 Burroughs, M. S.
 Burrus, R. C.
 Buttler, G., Jr.
 Cake, H. H.
 Campbell, J. G.
 Caplain, P.
 *Card, T. B.
 Carleton, R. D.
 Carlson, M. O.
 Carpenter, D. F.
 *Carter, J. R.
 Carven, R. S., Jr.
 Carver, R. D.
 Cassidy, I. B.
 Cavarly, H. P., Jr.
 Chao, E. L.
 Chase, C. A.
 Chase, R. M.
 Chatham, C. L.
 Chatfield, R. S.
 Chen, T. W.
 Cherniack, N.
 Chien, C. T.
 Chilcott, E. R.
 Chittick, C. Y.
 Chou, Y. T.
 Christie, R. W.
 Chu, C. T.
 Church, J. W.
 Chutter, G. A.
 Clark, A. H.
 *Clark, E. P.
 *Clark, W. A., Jr.
 Clemens, H. S.
 Clifford, G. O.
 Cobb, H. B.
 Coddling, L. W.
 Coffin, P. T.
 Cohen, Sam
 Cohen, Sigmund
 *Collins, J. J.
 Connell, L. H.
 Connors, F. J.
 Conolly, W. R.
 Coogan, E. D.
 Cook, E.
 Cook, J. F., Jr.
 Cook, R. M.
 Cooper, B. A.
 Cooper, W. E.
 Copellman, S. J.
 *Corbett, W. P.
 Cosgrove, J. M.
 †Counts, G. A.
 Courtney, T. E.
 Cowie, L. K.
 Cox, M. R.
 Craig, T. S.
 Croft, W. J., Jr.
 Crosby, P. W.
 Croskery, G. D.
 Culver, L. R.
 Cummings, R. F.
 Cunningham, C. H.
 Cunningham, K. M.
 Cushman, G. A.
 Cychol, J. J.
 Daesen, J. R.
 *Dahl, O. G. C.

- Daley, W. E.
 Dallye, F. R.
 Danenhour, G. B.
 Davidson, F. G.
 *Davis, A. R.
 Davis, L. B.
 †Dean, G. E.
 Dean, J. P.
 Dedouloff, A. A.
 Denkinger, G. M.
 *Dennison, E. S.
 Dettling, C. J.
 Diamond, H.
 Dibble, W. H.
 Dickerman, W. P.
 Dickson, B. A.
 Didisheim, F. M.
 Dimmick, H. S.
 Dimmock, M. S.
 Dingee, A. L. M.
 Dittenhofer, E. N.
 *Dixon, V.
 Dougherty, H. M.
 Dove, W. B. K.
 *Downey, J. E., Jr.
 Downing, R. E.
 Driscoll, W. B.
 Dudley, S.
 Duge, H. J.
 DuVernet, J. N.
 Dyer, C. P.
 Dyer, G. H.
 Dyer, H. A.
 Eckberg, A. E.
 Edmonds, R. W.
 Edwards, C. H.
 Edwards, M. R.
 Efinoff, V. V.
 Eiseman, M.
 Eisenstat, S. A.
 *Eksergian, C. L.
 Ellsworth, M. W.
 Elmer, W. B.
 Emerson, L. W.
 Erickson, G. L.
 *Erikson, A. F.
 Esner, A.
 Espinosa, J. C.
 Essick, B.
 *Facey, J. A.
 Fagan, H. J.
 Fales, E. C.
 Feinberg, M.
 Ferguson, W. T.
 *Finch, H. F.
 First, M. J.
 Fisher, R. C.
 Fischer, A. H.
 Fischer, H. A.
 *Flaherty, F. T.
 Flanders, A. L.
 Flather, J. H.
 *Fleming, W. A.
 *Fletcher, A. H.
 Fletcher, F. A.
 Flory, C. L.
 Forrester, J. J., Jr.
 Fox, G. N.
 Freedman, L. H.
 Freeman, T. T.
 *Freeman, W. M. B.
 Freeman, W. W. K.
 Freiheit, A. J.
 Friedrich, V., Jr.
 *Frost, R. B.
 Fulton, C. C.
 Fynn, G. F.
 Gallagher, E. F.
 Gardiner, W. A.
 Gault, H. M.
 Gayley, H. C.
 Gens, M. H.
 Gentleman, L. M.
 Gilbert, R. H.
 Gill, T. H.
 Givner, J.
 Godard, G. D.
 Goodnow, J. M.
 Gordon, W. L.
 Gordon, M. J.
 Gorman, M. J.
 †Gould, S. W.
 Grady, W. J.
 Gray, O. D.
 †Green, R.
 Greenewalt, C. H.
 Greening, C. W.
 †Griffith, L. B.
 Gross, D. I.
 Grover, C. D.
 Gruppe, E. A.
 Guardo, J. L.
 Guerin, F. J.
 Guyer, R. G.
 Haebler, W. T.
 Haigh, E. R.
 Haley, H. D.
 Hall, F. C.
 Hall, S.
 Hallinan, C. J.
 *Hamburger, W. J.
 Hammond, A. M.
 Hammond, E. W.
 Hand, L. D.
 *Hanson, P. L.
 †Hanten, R. E.
 Hardin, J. R.
 Harding, C. T.
 Harris, L. V.
 Harris, W. W.

Hartley, M. A.
 *Harvey, A. D.
 Harvey, J. D.
 Haskel, R. W.
 Haskell, B., Jr.
 Hastings, A. W.
 Hastings, P. M.
 Hauber, J. G.
 Hayes, J. A.
 Hayes, R. S.
 Hayward, R.
 Heathman, G. W.
 Heavey, W. F.
 Hemenway, S. H.
 Hemeon, J. R.
 Hemphill, J. W.
 Hennessy, J. F.
 Henriksen, S. J.
 Hermann, E. R.
 Hershenson, B. B.
 *Hersum, L. M.
 Hewes, W. R.
 †Hewitt, L. H.
 Hickernell, L. F.
 Hickey, H. A.
 Higgins, F. A.
 †Hill, R. A.
 Hillard, P. N.
 Hindes, B. G.
 Ho, T.
 Hobbs, L. H.
 Hogan, R. J.
 Hoge, W. M.
 Holderness, G. S.
 Hollender, E. A.
 Holmes, P. B.
 Hoops, W. A.
 Hopkins, G. R.
 Hopkinson, R.
 Horn, H. J., Jr.
 Horovitz, O. H.
 †Horowitz, L. G.
 Houghton, F. N.
 Howe, E. W.
 Howe, M.
 Howe, P. C.
 Howe, W. L.
 Howland, W. E.
 Howlett, F. A.
 Hubbard, E. R.
 Huger, W. E.
 Hunt, W. L.
 *Hunter, H. F.
 Hyland, W. L.
 Ingalls, R. O.
 Ingram, J. W.
 Irvine, E. S. J.
 Jackson, D. C., Jr.
 *Jackson, E. W.
 *Jetter, K.

Jewett, E. C.
 Johansen, E. L.
 Johns, D. F.
 *Johnson, A. T.
 Johnson, C. A.
 Johnston, A. C.
 Jones, J. E., Jr.
 Justheim, C. I.
 Karcher, J. E.
 Keane, E. C.
 Keenan, J. H.
 Keiller, T. M.
 Kellar, J. W.
 Kelley, J. S.
 Kelly, D. F.
 Kenrick, G. W.
 Kerr, C., Jr.
 Kimball, M. C.
 *Kimball, P. B.
 King, A. S.
 King, G. W.
 *Kinzel, A. B.
 Kirley, W. T.
 Kitson, S. W.
 *Kittredge, F. B.
 Kitts, W. A.
 Knight, D. P.
 Knight, M.
 Koch, F. C.
 Koehler, E. H., Jr.
 Krafft, Miss P. C.
 Ku, K. C.
 Kurtz, F. M.
 Lacy, K. B.
 Laird, L. B.
 Lamont, P. T.
 Lang, W. H.
 Langdon, A.
 Laverty, F. J.
 †Lawrence, I. C.
 *Lazo, F.
 Leach, R. W.
 *LeFevre, G. H.
 Leland, S. D., Jr.
 Lennon, W. E.
 *Leonori, W. H., Jr.
 Lermond, C. E.
 Levenson, B. H.
 Lewis, L. C.
 *Li, C.
 Li, Y. H.
 Li, Z. Z.
 Linsley, D. R.
 Lippincott, A. C., Jr.
 Littlefield, R. M.
 Lo, C. F.
 Longfellow, C. F., Jr.
 †Loper, H. B.
 Losso, I.
 Lovejoy, J.

- Lund, R. L., Jr.
 Lundborg, C. J.
 Lurie, E.
 Luykx, D. J.
 *Lyman, D. F.
 McClellan, R. N.
 *McCloskey, L. C.
 McClure, M. A.
 McConnell, S. P.
 McCreery, D. H.
 McCurdy, H. W.
 MacDonald, H. D.
 Macdonald, R. G.
 McFarland, J. B.
 McGee, H. S.
 McGhie, M. S.
 McGrady, C. T.
 McIntyre, H. B.
 McIver, W. R.
 *McKeen, W. R., Jr.
 Mackenzie, L.
 MacMahon, W. K.
 *McNaul, J. W.
 Macomber, J. K.
 Maconi, F.
 McWilliams, J. S.
 Malcolm, C. G.
 Maling, C. C.
 Mall, Miss M.
 Mandel, L.
 *Mann, L.
 Mann, R. F.
 Manshel, M. M.
 Manville, C. W.
 Maria, A. J.
 Mark, I., Jr.
 †Marlow, F. W.
 Marmon, F. H.
 Marsh, D. B.
 Maschal, C. W.
 Mason, F. M., Jr.
 Matthews, W. R.
 Maury, D. H., Jr.
 Meier, J.
 Merrill, E. A.
 Metcalf, H. F.
 Midwood, G. A., Jr.
 Miller, T. T.
 Milliken, A. W.
 *Mills, O. A.
 Molinar, J. C.
 Moor, H. E.
 Moore, C. A.
 †Moore, K. M.
 *Moosbrugger, J. C.
 Morgan, F. R.
 Morgan, W. V.
 Morris, F. H.
 Morse, C. B.
 Morse, Miss E. L.
 Morse, W. C.
 *Morss, C. A., Jr.
 Morton, J. R., Jr.
 Moynihan, D. P.
 Mueser, W. H.
 Muhlenberg, C. H.
 Munce, M. G.
 *Munning, A. P.
 Murdoch, P. S.
 Myers, B.
 Nash, P. R.
 Neiley, S. B.
 *Nelles, P. A., Jr.
 *Nelson, E. M. C.
 Nelson, S.
 Nesmith, J. 2d
 *Newcomer, D. A.
 Newhall, W. L.
 †Newman, J. B., Jr.
 Nichols, J. T.
 Nichols, S. E.
 Nicholson, A. K.
 *Norton, A. W.
 Nock, H. K.
 Norton, E. L.
 Norton, J. R.
 Noveck, G. A.
 O'Brien, P. S.
 O'Connor, E. J.
 Oddlafson, A. G.
 Olsson, R. W.
 Osborne, F. H.
 Ottonello, R. J.
 Owens, G. F. B.
 Page, K. L.
 *Painter, C. R.
 Palmer, Miss G. A.
 Papov, I.
 Patty, J. C.
 Paulsen, R.
 Payne, H. J.
 Pearson, H. L.
 Penna, A. deT.
 Perine, K. B.
 Perkins, C. W.
 Perkins, E. H.
 Perkins, M. D.
 Pettingill, R. G.
 Pfohl, R. E.
 Phelps, D. S.
 Phillips, P. M.
 Pierce, A. H.
 Pierce, Miss M.
 Pinkham, W. D.
 Plaza, H. P.
 †Pohl, H. H.
 Ponce-Canton, A.
 Poole, H. A.
 Poole, J. W.
 *Poole, R. C.

- †Pope, L.
 Popereff, A. P.
 Post, F. M.
 *Potter, G. W.
 Powell, A. P.
 Pratt, F.
 Pratt, H. C.
 Preloran, L. A.
 Prescott, R.
 Purinton, W. B.
 Rader, T. S.
 Radin, A.
 Raffety, J. S.
 Rairden, A. S.
 Ramsay, G. D.
 Ramsey, W. K.
 Randlett, N. P.
 Rapp, W. G.
 Read, E. N.
 Reed, D. J.
 †Regan, W. J.
 Reiche, P.
 *Reinhard, H. W.
 Reinhardt, E. A.
 *Rettew, H. F.
 Reynolds, S. H.
 †Rhodes, L. F.
 Richards, C. R., Jr.
 Rickers, F. O.
 Riegel, T.
 Riley, W. A.
 Ring, V. DeP.
 Robbins, K. W.
 Roberts, H. J.
 Robinson, J. F.
 Robinson, P.
 Rockefeller, H. E.
 Roethlisberger, F. J.
 Rogers, A. F.
 Roll, C. S.
 Ronkanen, V. A.
 Rose, E. L.
 Rose, W. H. F., Jr.
 Ross, W. S.
 *Rowell, F. M.
 Rubin, B. W.
 *Rubin, S.
 Rundlett, R. C.
 Russell, F. H.
 Russell, W. W.
 Rutherford, P. H.
 Ryan, J. F.
 Ryerson, S. M.
 *Safford, G. S.
 Sallaway, J. E.
 Sammet, F. P.
 Sammet, W. P.
 Sargent, A.
 Sarros, J. D.
 Sawyer, D. D.
 Schneiderman, N.
 Schoenherr, K. E.
 Schreiber, R. F.
 Schulman, W.
 Schumacker, G. P., Jr.
 Schureman, C. B.
 Schwamb, E. B.
 Schwamb, T. A.
 *Scott, E. J., Jr.
 Scott, J. A.
 *Scott, P.
 Seddon, J.
 Seegal, S. M.
 Shampianer, M.
 Sharrer, R. A.
 Shattuck, C. W.
 Shattuck, G. A.
 Shaw, D. N.
 Shaw, E. C.
 Shaw, R. Jr.
 Shearer, W. E.
 Sheeran, T. F.
 Sheffield, J. R., Jr.
 Sheldon, M. F.
 Shepherd, T. E.
 Sheppard, M. K.
 †Shingler, D. G.
 Shirey, H. M.
 Shlikoff, T. P.
 Shoda, K.
 Sholtz, R. J.
 Shotwell, D. R.
 *Sias, O. B.
 Silverman, A. G.
 Silverman, I. J.
 Simons, H. A.
 Siverling, M. T.
 Slayter, F. E.
 Slepian, A.
 Smith, C. S.
 Smith, C. F.
 Smith, E.
 Smith, G.
 Smith, I. J., Jr.
 Smith, J. B.
 †Smith, P. W.
 Snell, F. A.
 *So, P. N.
 Southam, A. E.
 Spanur, A., Jr.
 Speir, G. B.
 Spooner, H. M.
 Spoor, D. D.
 Stalbird, J. A.
 †Stamps, T. D.
 Stanley, H. D.
 Stanley, H. P.
 Starkweather, J. B.
 Stevens, A. H.
 Stevenson, V. E. V.

- Stewart, D. C.
 Stone, R. A.
 Stose, C. W.
 Strauss, S. M.
 Strieder, J. W.
 Strong, E. M.
 Stubbs, T. H.
 Styer, W. D.
 Subirana, T. A.
 Sullivan, C. D.
 Ta, Y.
 Tabor, L. P.
 Taft, W. K.
 Taylor, C. H.
 Taylor, C. M., Jr.
 Taylor, G. E.
 Teeter, J. H.
 Teich, J.
 Terkelsen, E. A.
 Tewksbury, R. B.
 Thellefsen, C. M.
 Thomas, E. R.
 Thomas, L. E.
 Thomas, S. G.
 Thomson, W. M.
 Thoron, B. W.
 Thulman, R. K.
 †Timothy, P. H.
 Tobin, F. L.
 Tomlinson, H. R.
 Tripp, W. A.
 †Troland, G. B.
 Trowbridge, L. W.
 True, O. S.
 Tsui, H. Y.
 Tucker, C. M.
 Tyson, C. W.
 Ulbrich, M. A.
 Untiedt, F. H.
 Upham, H. B.
 Van Neste, V.
 Van Pelt, E. V. B., Jr.
 Vaughn, R. L.
 Vaupel, J. L.
 *Victor, H.
 Vilett, E. W.
 Vold, O. I.
 Waechter, J. M.
 Wagner, H. C.
 *Wald, W.
 Walke, R. S.
 Walker, A. N.
 Ward, J. S., Jr.
 Warner, D. F.
 Warren, R. B.
 Warrender, L. D.
 Washington, L.
 Wasserman, A. L.
 Waterman, R. E.
 Weber, B. A.
 Webster, F. D.
 Weis, C. L., Jr.
 Welling, C. McK.
 Wells, F. G.
 West, T. H.
 Wescott, F. T., Jr.
 *Westland, C. C.
 Westen, R. S.
 Whitehouse, I.
 Whitman, V. A.
 Whitemore, C. W.
 Whitten, G. P.
 Whittum, C. H.
 Wiegand, F. W.
 Wilbur, H. A.
 Wilkins, F. E.
 Wilks, A. P.
 Williams, H. L.
 Williams, L. A.
 Williams, M. W.
 Williams, T. F.
 *Wilson, O. G., Jr.
 *Winebaum, A.
 Wiren, G. R.
 *Wishnew, A.
 Witherow, H. M.
 Wolf, A.
 Wood, A. R.
 Wood, R. V.
 Woodbury, D. O.
 Worcester, D. K.
 †Worsham, L. D.
 Wray, T. S.
 Wright, L.
 Wyatt, C. R.
 Wynne, V. A.
 Young, C. L.
 †Young, J. M.
 Young, W. H., Jr.
 Zack, S. I.
 *Zager, H. A.
 Zeller, P. J. A.

*Awarded their degrees January 4, 1922 †Awarded their degrees October 19, 1921.

ADDRESSES WANTED

Mail has been returned to the Alumni Office for the following former students. Information is desired concerning these people, that they may be kept on the mailing list.

WALTER HUMPHREYS, *Secretary.*

<i>Name</i>	<i>Class</i>	<i>Last Known Address</i>
Walter Buck	'72	15 Congress Street, Boston, Mass.
Aechirua Hongma	'74	Ichikawa-Chibaken, Japan
Edward N. Sampson	'76	21 Saratoga Street, East Boston, Mass.
Walter H. Plimpton	'77	373 Harvard Street, Brookline, Mass.
William H. V. Rosing	'81	33d Avenue and Burnham Street, Milwaukee, Wis.
Joseph D. Plumb	'83	8 Landscape Avenue, Yonkers, N. Y.
Charles B. Emerson	'85	Sixth Avenue, San Francisco, Cal.
Ralph W. Reynolds	'88	66 West 69th Street, New York, N. Y.
Frank B. VanNostrand	'89	246 75th Street, Apartment R-4, New York, N. Y.
Guy J. Burnham	'92	Palace Hotel, 317 South Oliver Street, Los Angeles, Cal.
Barton P. Jenks	'92	The Watson Co., Attleboro, Mass.
Miss Marion H. Carter	'93	504 West 143d Street, New York, N. Y.
Arthur Farwell	'93	2811 Forest Avenue, Berkeley, Cal.
George M. Hawes	'93	107 Bellfontaine Street, Pasadena, Cal.
Walter H. Vorce	'94	St. Albans, Vt.
John B. Warren	'93	2929 Broadway, New York, N. Y.
Ralph H. Ober	'94	Engineers School, Camp Humphrey, Va.
Howard E. Whiting	'94	The Esmond, Philadelphia, Pa.
William B. Corson	'96	Care W. J. Sloan, 46 Fifth Avenue, New York, N. Y.
Lamont R. Stroud	'96	St. Albans, Vt.
Lincoln Crocker	'97	Santiago, Chile
Frank E. Underwood	'97	26 Commonwealth Terrace, Brighton, Mass.
Thomas M. Vinton	'97	103 Park Avenue, New York, N. Y.
Irvin H. Kaufman	'98	105 West 40th Street, New York, N. Y.
Harry A. F. Campbell	'99	Hotel Regina, Paris, France
Wallace F. Goodnow	'99	104 West 42d Street, New York, N. Y.
David H. Hayden	'99	103 Park Avenue, New York, N. Y.
W. Frank Hyde	'99	1142 Eoff Street, Wheeling, W. Va.
Henry G. Morse, Jr.	'99	340 Madison Avenue, New York, N. Y.
Harris G. Hooper	'00	340 O'Farrell Street, San Francisco, Cal.
George S. Tiffany	'00	Barnett Building, Jacksonville, Fla.
Edwin P. Burdick	'01	Cordova Apartments, 80 South Carolina Avenue, Atlantic City, N. J.
Aaron Schwartz	'02	49 St. Marys Street, Brookline, Mass.
Mrs. Bayard R. Frazier	'03	32 Curtis Terrace, Pittsfield, Mass.
William A. Harrigan	'03	677 Dudley Street, Box 30, Boston, Mass.
James P. Buckley, Jr.	'04	86 Flint Street, Salem, Mass.
Lewis T. Howard	'04	17 Battery Place, New York, N. Y.
Enrique Cuesta-Gallarde	'05	Panoquia No. 3, Guadalaajara, Mexico
Leo F. O'Neil	'05	618 Winthrop Building, Boston, Mass.
Howard C. Blake	'05	1563 East First Street, Long Beach, Cal.
Frank Haley	'06	9 Adams Court, Lynn, Mass.
Arthur L. Joyce	'06	41 Hubbard Avenue, Cambridge, Mass.
Garfield Riley	'06	1855 Columbia Road, Washington, D. C.
Louis H. Tripp	'06	Office Quartermaster General, War Department, Washington, D. C.
Jay W. Williams, Jr.	'06	55 Ashford Street, Allston, Mass.

Conrad Jacobson	'07	Peter Bent Brigham Hospital, Boston, Mass.
John H. Link	'07	125 College Avenue, Ashland, Ohio
Charles W. Bailey	'08	North Hancock Street, Lexington, Mass.
Mortimer P. Burroughs	'08	Care Burroughs Adding Machine Co., Detroit, Mich.
Howard P. Belknap	'09	1036 Commonwealth Avenue, Boston, Mass.
Michael Terry	'09	701 Seventh Avenue, S., St. Cloud, Minn.
Luther Davis	'10	Care Walter Baker & Co., Milton, Mass.
Philip T. Harris	'10	6113 Carpenter Street, Philadelphia, Pa.
William E. Fortune	'11	McLean Hospital, Waverly 79, Mass.
Benjamin Robinson	'11	464 Chestnut Street, Springfield, Mass.
William J. Wilson	'11	11 Glenway Street, Dorchester, Mass.
George H. Abel	'12	206 Stewart Avenue, Ithaca, N. Y.
Herbert S. Cummings	'12	104 Sharon Street, West Medford, Mass.
Charles L. Gabriel	'12	Port Morris Chemical Works, Inc., 141st Street and Locust Avenue, New York, N. Y.
Charles C. Jonew	'12	Box 12, Enid, Okla.
Francis T. McAvoy	'12	13 St. Joseph Street, Jamaica Plain, Mass.
Cecil B. Vaughn	'12	Presso "Idres," Terni, Italy
Roldao Bardosa	'14	68 Rue Assemblea, Rio de Janeiro, Brazil, S. A.
Mrs. Ray W. Hart	'14	Jerome, Ariz.
Richard E. Morrison	'14	6 Orchard Street, Belmont, Mass.
Clarence B. Rogers	'14	12 West 95th Street, New York, N. Y.
Arthur H. Walbridge	'14	Brooks Steamship Corporation, 25 Broad Street, New York, N. Y.
Everett L. Williams	'14	Tenth Floor, Marquette Building, Detroit, Mich.
Nathan T. Ashkins	'15	1235 Elder Avenue, Apartment 11, Los Angeles, Cal.
Mervin S. Hart	'15	New Britain, Conn.
Harry I. Lewis	'15	1878 East 82d Street, Cleveland, Ohio
Clyde R. Moulton	'15	Care Chamber of Commerce, East Palestine, Ohio
Walter J. Stewart	'15	99 Claremont Avenue, New York, N. Y.
Charles W. Whittall	'15	122 East 82d Street, New York, N. Y.
Lewis M. Dow	'16	19 Woodbine Street, Auburndale, Mass.
Joseph R. Duggan	'16	University Club, Bethlehem, Pa.
Chan Kinthong	'16	Care Lumkee, Bangkok, Siam
Arthur T. Munyan	'16	114 East 39th Street, New York, N. Y.
Arthur G. Reycroft	'16	601 Reid Avenue, Monessen, Pa.
David M. Shohet	'16	112 Marion Street, East Boston, Mass.
Leon S. Wright	'16	276 Park Street, Akron, Ohio
William A. R. Brown	'17	10 Malbon Place, Roxbury 19, Mass.
Kirkland H. Day	'17	Riverbank Court, Cambridge, Mass.
Donald G. Ferguson	'17	56 Bay State Road, Boston, Mass.
Charles O. Gibbon	'17	American Telegraph and Telephone Co., 195 Broadway, New York, N. Y.
Edgar S. Gorrell	'17	War Department, Washington, D. C.
Max T. Green	'17	584 Broadway, Everett, Mass.
Paul Hart Scott	'17	Waban Hill Road, Chestnut Hill, Mass.
Howard S. Thompson, Jr.	'17	9 Milton Square, Hyde Park, Mass.
Walter R. Herfurth	'18	70 Batavia Street, Boston, Mass.
Richard P. Eastman	'18	45 Fairmont Avenue, Wakefield, Mass.
Maurice Goldstein	'18	268 State Street, Boston, Mass.
Charles A. Hunter	'18	82 Woolson Street, Mattapan, Mass.
Elmer W. Lawrence	'18	Woods Hole, Mass.
J. Sidney Marine	'18	606 Fifth Avenue, New York, N. Y.
Harold W. Trease	'18	Newton, Iowa
Herbert B. Wheeler	'18	Fort San Houston, San Antonio, Texas
Ray H. Bartlett	'19	Nineteenth and Wentworth Streets, Lowell, Mass.
Andrew A. Cook	'19	157 Ronoda Avenue, Piedmont, Cal.
Victor Davidson	'19	236 Bryant Street, Malden, Mass.
Victor T. Givotovsky	'19	1324 St. Nicholas Avenue, New York, N. Y.
Gee C. Liu	'19	Y. M. C. A., Roanoke, Va.

Freeman H. Dyke	'20	40 East 40th Street, New York, N. Y.
Miss Catherine D. Jones	'20	4 Gay Street, Newtonville, Mass.
Herbert G. Lockhart	'20	1333 North Frezier Street, W., Philadelphia, Pa.
Yuan Lee	'20	Canton, China
Samuel A. Milliken	'20	149 Warren Street, Roxbury, Mass.
Benjamin C. Morse, Jr.	'20	Manila, P. I.
Juichiro Okada	'20	Hiroshima, Japan
Elias K. Sehagian	'20	Kesirig, Armenia, Turkey
Simeon E. Travis	'20	Box 141, Knoxville, Tenn.
Han Chen Wang	'20	Peking, China
William Aronoff	'21	2 Collamore Place, Boston, Mass.
Emil J. Backmann	'21	56 Fenwood Road, Roxbury, Mass.
David J. Baker	'21	6 Leverett Street, Boston, Mass.
Elmer L. W. Barry	'21	Concord Street, Holliston, Mass.
Joseph H. Bayle	'21	321 West 76th Street, New York, N. Y.
Robert E. Beard	'21	New Hope, Pa.
Samuel F. Chafin	'21	Saranac Lake, New York
Raymond F. Cornell	'21	89 Pleasant Street, North Andover, Mass.
J. Lincoln Dodson	'21	Des Moines, Iowa
Harold Finkelstein	'21	Scranton, Pa.
Matthew J. Flanagan	'21	33 Valentine Street, Roxbury, Mass.
Winfred L. Foss	'21	Buffalo, N. Y.
Abraham H. Goodman	'21	130 Saratoga Street, East Boston, Mass.
Laureus M. Hamilton	'21	Sterlington, Rockland Co., N. Y.
Charles A. Hill	'21	41 Ashmont Street, Ashmont, Mass.
Sigurd Johnson	'21	Box 193, Boston, Mass.
John R. Leslie	'21	15 East 38th Street, New York, N. Y.
John W. McFarlon	'21	65 Prospect Street, Cambridge, Mass.
Ernest Pauli	'21	33 Intervale Street, Lynn, Mass.
Melvin C. Rose	'21	26 Webster Street, Brookline, Mass.
Howard L. Ross	'21	116 West 72d Street, New York, N. Y.
Nicholas J. Rossi	'21	7 Follen Street, Boston, Mass.
James E. T. Sandberg	'21	5 Warwick Road, Belmont, Mass.
Leonard A. Schwartz	'21	4 Schuyler Street, Robxury, Mass.
George Slover	'21	New Bern, N. C.
Alfred K. Trimble	'21	715 Hadley Avenue, Houston, Texas
Charles W. Tucker	'21	314 Huntington Avenue, Boston, Mass.
Eliot Underhill	'21	San Rafael Heights, Pasadena, Cal.
Homer N. Wallin	'21	Washburn, North Dakota

EDITORIALS

BY DEATH AND RESIGNATION

By death, the losses in the past two years have been light in numbers, heavy in value and in consequence. No one thinks of "replacing" Maclaurin or Sedgwick; one cannot replace such rich and dynamic personalities.

By resignation the losses are beginning to mount in a way that takes the breath. For a two-year period they are heavy beyond precedent. One member of the faculty of long service has said that he could not remember any such percentage of loss, whether in numbers or value, within a like period of time during the history of the Institute.

Call the roll of these two years. Noyes, Spear, Walker, Aydelotte, Burton, Wilson, Hoffman, Warren, Humphreys.

Noyes went to California Institute of Technology; Walker to his professional practice; Spear into business; Aydelotte to be president of Swarthmore; Burton to a long-deserved and well-earned retirement.

And this year! Wilson goes to a professorship at Harvard, Warren to be dean of Sheffield Scientific School at Yale, Humphreys into business, Hoffman, like Burton, retires. Talbot resigns as head of Course V, but will remain, every one hopes, to continue his success as Dean of students.

It is no light loss, nor one easy of repair, for an institution to lose within two years, the president, an ex-president, the dean, five heads of courses, the registrar, and two professors of the highest ability. It is an interregnum with a vengeance. It marks, with unpleasantly dramatic force, the beginning of a new era. It renders the position of an incoming president one of particular difficulty. But above all, it makes the immediate election of that president imperative!

And the pity of it is that while some of these losses were unavoidable, for one reason or another, there are others, not the least important, where a president on the job, or a more settled state of affairs, or a salary scale approximating more justly those of other institutions, might have saved us men who will be sorely missed. Death will take no denial; retirement at a ripe age is sad but just and, doubtless, for the good of the school; such promotions as that of Professor Aydelotte are not to be avoided.

But to lose able and valued officers of instruction or administration to business, or professional work, or, worse, to other institutions, means something rotten in the state of Denmark. The Institute ought to be able to hold its men. But how much does it really care about holding them? Two suggestions have been recently made; one, in the president's report, that it may be necessary to lower the salary scale; the other, that in the future members of the instructing staff must give more time

to teaching and less to their personal consulting practices. In view of the resignations of this year and last, both suggestions are unspeakable folly — folly even to suicide. As Professor Passano pointed out in the April issue of the REVIEW, the recent advance in costs at the Institute is largely in overhead and not in salaries; that in an educational institution the costs of instruction, of which salaries are chief, must inevitably have precedence over plant upkeep and administration; that any policy which thinks salaries the last costs to increase and the first to cut down is a demonstrably inefficient policy. Second, if we cannot pay salaries, we must either share our instructors with business or lose them to business. Sharing them may look expensive on the little time schedules the Bursar's office makes us fill out; losing them and replacing them with cheaper and less efficient men is not, in the long run, going to be an economy. In these cases it is the good men, always, that go. No one wants the others . . . the men concerning whom, it is said, Dr. Maclaurin often inquired, "How did so-and-so and so-and-so ever get promoted?"

But better than salaries to hold men is the personality of a strong broad-visioned, far-seeing, sympathetic, magnetic executive. One who can so grapple men to him with hoops of steel that promotion, money, even larger fields will be foregone, however reluctantly, for the continued opportunity of making the vision come true at Technology. An interregnum is always an unsatisfactory time, perhaps most unsatisfactory to the powers that control. The Administrative Committee has done its able, earnest, unselfish, hardworking best. Everybody gratefully acknowledges it, but acknowledges, also, that that best is not good enough. It never, under the circumstances, could be. There is a divinity that doth hedge a king. The divinity hedging a committee is not discernible to the naked eye. When we have a president again we shall have loyalty, coöperation, self-sacrifice, in short, vision. None of these has been much in evidence of late. We shall go on to greater achievements, those of us who did not allow ourselves to be put out of patience by the interregnum. We bid those who go from us, wherever they may go, godspeed and success. And our good wishes are even more hearty for those who remain.

THE NEW DEPARTMENT HEADS

There seems to be a general sense of satisfaction that the recent appointments of heads for the departments of Physics and of Biology and Public Health have been given to men within the departments, men whom we know and like and respect, rather than to strangers from without. Professors Prescott and Norton bring to their tasks not only long service within the Institute but enviable and solidly grounded reputations in the industrial world. As scholars and investigators, as administrators and men of affairs, they will undoubtedly not only increase the power and efficiency of their departments, but make them increasingly important in the rapidly growing liaison between Tech-

nology and the business world. Professor Norton's already fine record in his short term as director of the Division of Industrial Coöperation and Research has been most gratifying and Professor Prescott's work in connection with the fisheries and coffee businesses has been most valuable in making the Institute known abroad. (The coffee research, particularly, has furnished us with more newspaper publicity this last year than almost any other single item.)

This latter consideration, in the case of both departments, is interesting. Professors Norton and Prescott, both experts in industrial science, replace scholars like Sedgwick and Wilson, who were not primarily interested in the industrial side of their subjects. There is no question in any one's mind, probably, of any intention to slight pure science or to develop industrial technology at the expense of the other. But that these two appointments come so naturally and so fittingly shows, nevertheless, a distinct tendency in the last year or two toward linking the Institute more closely with business. The more this tendency manifests itself the greater must be the care to cherish and protect and advance the research work in pure science. The recent appropriations of funds, for this purpose, to free able men for research, is sufficient proof that this need is being adequately looked out for.

In the department of Biology and Public Health there is another consideration. Professor Sedgwick gave his life largely to developing a school of public health. That was perhaps his chief interest in the department. Very shortly after his death, however, Harvard University received a magnificent bequest for a school of public health, undoubtedly because at Harvard such a school could work in close coöperation with her medical school. Competition on the part of Technology with such a school would be useless and wasteful. It seems reasonable, then, to believe that in the future our own department will become more and more entirely a department of industrial biology, leaving the field in medical and health biology to the new Harvard school, which has, by the way, already annexed the services of the head of our Physics department, E. B. Wilson.

It seems tragic, in a way, that the fruits of the work for which Professor Sedgwick was so long responsible and with which his name will be always so closely and so splendidly connected, should be reaped by another school — but we can comfort ourselves by remembering that had it not been for William Sedgwick there might not have been any school in public health at Harvard to endow. His work is not lost or wasted; it is merely carried on in a different way than he had hoped. And it leaves the field of industrial biology to be developed without competition by that department in the Institute which he founded and built up.

MISFITS

The courses in Electrical Engineering and in Business Administration deserve the fullest coöperation of both students and faculty in their attempts to limit their registration to the best men; to refuse

to admit to professional work, in one case, any man not obviously fitted or ready to take it, and, in the other, to weed out from advanced registration all the dead wood. If every department formulated such a policy and carried it out vigorously there would be a smaller registration and a better one. Under the present circumstances, however, when slackers and incompetents are carried on the course rolls long after they should have been gotten rid of, the procedure of these two departments raises a difficult question. No one doubts that many unfit men get into Technology and are allowed to remain longer than they should. That problem will not be taken care of until we have some sort of effectual scheme of psychological tests at entrance and during the first year. But leaving that question, what of the man who is either not admitted or is disbarred by Course VI or Course XV, but whose general record is not so bad as to give any excuse for asking him to resign from the Institute? Cases of this sort are multiplying. The man may, perhaps, enter Courses IX-A or B, but that is a hit-or-miss, unscientific, unsatisfactory solution. The man may not want a course in general science or general engineering, which is what these two courses aim to give. He may still want a professional course. The other courses naturally look with some suspicion on him. He can have his schedule arranged by a special committee but, again, without any particularly expert attention to his unique individual necessities.

There is a growing need, then, of a new faculty committee or a new administrative department at Technology. An expert in vocational guidance, if you like. At present men choose their courses like sheep. Civil and Mechanical Engineering used to be most popular; today the swing is toward Chemical Engineering and Business Administration. Courses like Biology, Geological Engineering and others do not have really enough men to do their best work. Freshmen do not know how to choose properly; they have no really scientific advice on how to choose. Herd instinct gets in its deadly work and a good biologist or geologist is lost for a mediocre chemical engineer or an ordinary business man.

It is, perhaps, not possible, to choose a man's course for him at the beginning. Give him the best possible advice; offer bonuses, so to speak, for the smaller courses; raise the requirements in the larger courses. But afterwards, in the second or third year, if a man is obviously not getting on well in his chosen course, if he cannot be admitted to his advanced professional work, instead of letting him drift into any course that will take him, or drift away from the Institute altogether, give the expert in vocational guidance a chance at him. Find out then what course he is fitted for — for obviously ineptness in one course does not necessarily mean incompetence in all engineering — and put him in that course, regardless of that course's protest. Feed the smaller courses wherever possible. In some way, some genuinely scientific way, we should do our utmost to prevent the present, ever growing, unnecessary waste in human possibilities, which gives us, after all, our only reasons for existing.

THE NEW MANAGEMENT OF THE REVIEW

In this issue you may read the interesting report made by Prof. A. T. Robinson, chairman of the Advisory Council on Student Publications, on the gratifying condition of affairs among the undergraduate papers, *The Tech*, the *Tech Engineering News*, the *Voo Doo*, and *Technique*. Prof. Robinson pays tribute not only to their sound business policies, their admirably articulated organizations, their surprisingly successful financial balance sheets, but also, — and this is, after all, far more important as it deals with the reasons for the papers existing at all, — the high character of the writing and editing of their issues.

With this judgment the editor of the REVIEW most heartily concurs. As examples of good writing and intelligent editing he has the greatest admiration for *The Tech*, the *T. E. N.* and, especially this last year, the *Voodoo*. He believes that on the whole they cannot be beaten as examples of American university journalism.

It is only natural and fitting, therefore, that the new editor and the new managing editor of the REVIEW should be products of our own school of journalism, two from among the very best we have produced in that field in the past five years.

A word of explanation is perhaps in order. There seems no longer any valid reason for waiting for a new president of the Institute or a new manager of the Alumni Association before anything can be done. We have waited for two years — vainly. Time something was done! So thinks the Alumni committee on the TECHNOLOGY ALUMNI REVIEW, and again the present editor heartily concurs. The present REVIEW is too bulky, too formal, too stereotyped, too traditional — anything you like. Harvard, Yale and Princeton have their weeklies. Almost every great alumni association has at least a monthly. The younger alumni want the news fresh and all the news, including athletics and undergraduate affairs. They want editors and contributors with the younger generation's point of view. They want more and better class notes; they want closer liaison between the "home office" and the various local and class organizations.

The present editor — a fairly busy instructor in the English department and a Harvard graduate at that — has been doing what he could single handed for the past five years, since that June, 1917, when he was asked to take charge while Ike Litchfield was in Washington on war work. He has enjoyed the most friendly coöperation and support and from every one concerned; on the other hand he has been given splendid freedom from meddling and interference. Conditions for work have been ideal, and the opportunities for learning what Technology really is, and of becoming a real part of it in a small way, have been unusual and valuable beyond words for one who came from another college to teach in a department somewhat off the main track of Technology interests. Working as he has, it has been necessary to rely greatly upon clippings and reprints, not always of the most accurate, without much opportunity for rewriting, and without any time at all for original investigation and reporting. But for five years, on the whole, the present

editor believes the REVIEW record of events has been sufficiently full, complete, accurate and varied to make these volumes at least one of the possible sources for the future history of Technology.

This state of things obviously could not go on. A monthly became a necessity, and therefore younger editors; Technology men, working on full time if possible, young men full of knowledge of the later generations, full of zeal, ambition, vigor, pep, zip, and nerve.

We believe we have found those editors. One of them is known to everyone who was ever at the Institute between the fall of 1913 and this present July. (In fact, he entered the Institute the same year the present editor did, which is, as you might say, a bond.) Harold E. Lobdell, '17, personnel manager of the Division of Industrial Coöperation and Research, Assistant Dean, inextinguishably interested and active in everything pertaining to the betterment of Technology publications both as an undergraduate and since, one of the hard-worked men in the central office during the Endowment Fund Campaign, a man soaked and steeped with Tech tradition and spirit and with a curiously wide and exact knowledge of men and things Technological.

Harold E. Lobdell was a student in the engineering option of Course IV, Class of 1917, leaving in fourth year to enter the military service.

Was General Manager of *The Tech*, Volume 36.

Commissioned in United States Army at the end of the first Plattsburg camp and served at Camp Devens; Port of Embarkation, Hoboken, N. J.; and as Transport Personnel Adjutant in the transatlantic courier service. Discharged as a first lieutenant of infantry.

Returned to Technology as assistant to Merton L. Emerson, '04, in the Endowment Fund campaign. Became assistant to Dr. William H. Walker at the inauguration of the Division of Industrial Coöperation and Research.

At present Assistant Dean of Students and Personnel Manager of the Division of Industrial Coöperation and Research.

Member of: Phi Kappa Sigma Fraternity; Faculty, M. I. T.

Holds following positions: Grand Secretary of Pi Delta Epsilon, National Collegiate Journalism Fraternity; Chairman Alumni Advisory Council on Undergraduate Publications; Eastern Vice-Chairman, Engineering College Magazines Associated.

The managing editor is Eric F. Hodgins, '22, the first general secretary ever chosen by a graduating class, with course secretaries under him; managing editor of *Voo Doo* this past year and one of the chief reasons why the paper was as well written and well edited and successful as it was; author of Tech Show 1922, "The Wrong Steer," a witty and ingenious comic opera libretto beyond the average; a man who has worked at editing and publishing before he entered the Institute, a man who wields a mean typewriter, a man who can write better than nine hundred and ninety-nine undergraduates out of a thousand. (The editor is here speaking professionally.)

In the hands of these two men lie the destinies of the REVIEW for

next year. The editor bespeaks for them, with the fullest assurance and confidence, an even better coöperation and support (were that possible) than he has himself received these past five years. *Gaudeant et floreat!*

ROBERT E. ROGERS.

NEW MATHEMATICS OPTION IN COURSE IX

THE new schedule of courses of instruction for next year contains the announcement of a new course to be added to the curriculum of the Institute. The new course leads to the Bachelor's degree for men who desire to specialize in Applied Mathematics. It is a course well adapted to serve as a preparation for later specialization in pure mathematics, in mathematical-physics, or along lines of experimental physics or engineering requiring a high degree of proficiency in mathematics.

Considerable latitude in the choice of subjects is provided for in the electives of the junior and senior years in order that the student shall be able to take, if he so desires, a considerable amount of work in general studies, or in scientific and engineering subjects in which mathematics play an important part, in addition to his purely mathematical courses. For example, he may elect courses in thermo-dynamics, mechanics, electricity, or in physical chemistry.

While a definite schedule for the second year is offered, any student who has completed satisfactorily the work of the first two years in any of the professional courses of the Institute, or their equivalent, provided always that a creditable record has been obtained in mathematics and physics, may be admitted to the work of the junior year in this option.

THE CHRONICLE OF SENIOR WEEK

WHEN the Juniors have a week, it lasts three days, but the Seniors get a good round five. They have to. No Faculty, however efficient, can mull over four years' worth of records for eight hundred and fifty men, and do it in three days. The interlude has got to be a little longer; the intermezzo must have a few more cadenzas in it. Wherefore, Senior Week for the Class of '22 began on the sixth of June and ended on the tenth.

The sixth saw Senior Week begin with a double celebration. The Seniors themselves journeyed by street car, on foot, and by boat, until they reached Pemberton, where they staged their annual picnic. The Faculty was content to hold its own in 10-250. It is hard to say which one was the more successful. The effects of the Faculty one did not pass off so quickly — or, to select a better tense, will not be passed off s. q. — but the exhilaration of the Seniors was pleasant enough while it lasted. It began at nine o'clock, when a fleet of articulated street cars set off across Harvard Bridge, their insides filled, their outsides covered with members of 1922. In these, the Seniors were conveyed to Kneeland Street, where they disembarked, and marched down Washington Street in a manner to cause complete suspension of all business activity. A squadron of police gave them safe conduct to Rowe's Wharf. The waiting steamer trimmed her ballast tanks, weighed her anchor, blew her whistle, and took the Seniors down to Pemberton.

J. E. Sallaway, chairman of the Picnic Committee, ran his events off with celerity. A dash the length of the swimming pool (for there wasn't any swimming in the ocean) was won by Preston Robinson. The dive went to W. B. Purinton. In two somewhat less stylized events, the tub race and the pole joust, C. H. Baker and J. R. Norton vanquished their fields. A degree rush (on dry land) followed, and the amphibious Mr. Preston Robinson scored another triumph. He got a Ph.D.

At one o'clock, dinner was served. Two of Bert Lowe's musicians played constantly and were heard occasionally.

After dinner there were several ball games. Course XV and Course II opposed each other, the outcome being a five to three victory for XV. The official scores wrote down J. W. Kellar as the winning pitcher, despite the protest of the entire Mechanical Engineering Department that R. H. Brown, XV, umpire should receive much of the credit. The Dirty Thirty and the Nasty Nine likewise crossed bats, but the tellers were not able to arrive at a conclusion on the score.

For the rest we quote from *The Tech*:

"The relay race was won by Course I with F. A. Howlett and J. W. Poole as stars. The dormitories won the tug-o'-war in one pull. T. F. Williams beat J. M. Cook by three straight 'knock-outs' in barrel

boxing. The tennis championship went to J. P. Elliott, after a hard battle with M. C. Bloom.

"C. D. Grover won the one-hundred-yard dash, and the three-legged race was won by the Semmet brothers. The potato race was won by L. B. Davis and W. W. K. Freeman teamed up with I. V. Levine as the victors in the rescue race.

"Although there was a doctor on hand throughout the day he had no chance to practice, as there was not an accident."

Shortly following which, although *The Tech* does not say so, the picnickers were persuaded, a few with difficulty, to come home.

The next event of Senior Week came the following afternoon. It was the Tea Dance, at which, in Walker Memorial, there assembled about two hundred couples who danced from three to six o'clock, and now and again drank tea. The matrons who poured were, Mrs. Bigelow, Mrs. Pearson, Mrs. Talbot and Mrs. Miller. R. C. Rundlett was chairman of the Committee on Arrangements. Morey Pearl's Chateau orchestra furnished the conventional rhythms.

In the evening, at eight o'clock, began the Pops. The chivalry of the Senior Class brought its beauty along, and plus a larger number of Alumni, filled Symphony Hall with its presence, its voice, its cardinal and gray balloons, and the noise of their bursting. Everyone had a lovely time, except Mr. Agide Jaccia at the conductor's desk. He might as well have stood at the conductor's desk of a one-man car, for all the silence his operations were accorded. He waved his futile baton above the din, and did his level best to exhort a Teutonic and leather-lunged brass section that it blow in a manner to make itself heard in the finale of the *Marche Slave*, but he was not successful.

Silence was accorded, however, and much applause, to C.A. Thomas, who sang a number of admirably chosen songs. S. Parker McConnell, ex-leader of the Glee Club, who conducted "Take Me Back To Tech," raised a plentiful volume of sound for Litchfield's famous chantey. Later, Mr. Stephen Townsend, leader of the Choral Society, led his charges through the intervals of the new Alma Mater.

The regular personnel of the Choral Society was augmented by a number of the Class of '17. It was '17's five-year reunion, in honor of which a number of them (*The Tech* counted two hundred, but cooler heads estimated them at fifty) attended the Pops in a body, clad in immaculate overalls. Mr. Jaccia noticed them and their dress and it would have been a gracious act had he sometime during the evening obliged with Strauss's "The Beautiful Blue Denim," in their honor, but apparently he was not in the mood. This neglect did not dampen the ardour of '17, all of whose members seemed remarkably spry and chipper for their ages.

Another special feature of the evening was the performance of the Glee Club's Quartet. Further, for Technology's special benefit, the orchestra played a number of selections from Tech Show 1922. Not all college audiences are privileged to hear the works of their student-musicians performed by an orchestra of seventy-five pieces, and had

the audience chosen to listen, it might have been astounded at the excellence of composition which the playing of the huge orchestra made so evident. H. G. Ripley's "Alone at Last" was revealed as a piece of work that Jerome Kern might not be at all ashamed of. Ripley's introductory passages, in the overture, were most adroitly filled with whole-tone harmonic that probably brought a short nod of approbation from Claude Debussy, could anyone have seen it. The sturdy rhythms and the melodic exuberance of Frank Gage, were likewise shown at their full value, but the audience was playing with its balloons and did not notice.

These events were all that differentiated Tech Night from other nights at the Pops. But there was one other specialty act: Dr. A. D. Little, the retiring president of the Alumni Association, added one more to the number of his collected speeches by a graceful presentation of the Class of '22 banner to Donald F. Carpenter, president of the class. Mr. Carpenter replied with a few Brief- and-Well-Chosens.

There was more music, of course, before the evening ended. Some of it was listened to. Finally, at the close of the program, the harried Mr. Jaccia pulled himself together and conducted audience and orchestra through the Stein Song, making his own mental reservations as he went. Thus ended the Pops.

Next evening came the Senior Dinner. At its start a count showed three hundred and ninety-six members of the graduating class present, whereupon, very obligingly, four more men entered and swelled the number to an even four hundred. These four hundred dined on Walker's best, smoked, played with a brand new batch of balloons (the supply seemed inexhaustible) cheered themselves into laryngitis, and then quieted down (somewhat) for a short business meeting. As a result of this meeting the following permanent officers of the class were elected: Donald F. Carpenter, president; Eric F. Hodgins, general secretary; W. W. Russell, member of the Alumni Council; C. E. Brokaw, and H. J. Horn, Jr., Executive Committee. This done, the four hundred settled back to bathe in the eloquence of the speakers of the evening. These were, Harry J. Carlson, '92, incoming president of the Alumni Association, Dean Talbot, '85, H. A. Morss, '93, assistant treasurer of the Corporation, Ike Litchfield, '85, and Prof. Robert E. Rogers, of the Department of English. The speeches were admirable and a touch of excitement was lent to the entire affair by a threatened combat between Ike Litchfield and Professor Rogers, the last two speakers, which grew out of a slurring reference by Mr. Litchfield to a blue crêpe shirt which Professor Rogers was most noticeably wearing. The tactful Mr. Carpenter, who presided as toastmaster, calmed the excited principals, and, to quote from the Technology Boll-Weevil Intelligencer, "the frackas was happily averted."

On Friday evening came the Senior Prom. The class, on its questionnaires, had voted that the affair be formal, but at the Senior Dinner the white flannel party made clever capital of the humidity and succeeded in jamming through an amendment permitting either dress.

A pleasant air of variety was thus lent to the Prom next evening. Three hundred and twenty couples filled the ball room of the Hotel Somerset, and danced occasionally.

Class Day began at 2 P.M. It was held this year in a tent erected in the Great Court. For the first time in years, ample seating capacity was provided. The boundary stakes of the tent seemed to enclose a space barely extensive enough for a Bryan majority, but when the tent was up it was found that all guarantees held, and that a full twenty-five hundred people were seated beneath it. For news of what occurred that afternoon, we again have recourse to *The Tech*:

"First Marshall C. E. Brokaw, opened the afternoon with a short speech and was followed by D. F. Carpenter, Class president. After a solo by C. A. Thomas, H. J. Horn, made the presentation speech. Among those who received the serious consideration of Mr. Horn was J. C. Patty, who was presented with a mustache in case the one he is at present using should wear out. D. R. Linsley, was given a flower which 'admitted free to all dances' in recognition of his ability to navigate his way into formal and informal affairs. W. W. Russell, received a 'Flapper' Statuette as a memento of his undergraduate fame as a connoisseur of femininity. H. M. Shirey, was awarded a janitor's coat. Mr. Shirey has served as the chairman of the Walker Memorial Committee and because of his efficient service in this capacity H. J. Horn felt some token of student appreciation was necessary.

"Next came the allegory. A burlesque is the term applied to it on the program, and the name is "The Three Mosquitoes." H. G. Gayley and J. W. Church have coöperated in producing the book for this play, and the entire production was directed by the latter. W. B. Purinton, was in charge of the stage and effects. The members of the cast were:

M. D'Argument, '22	H. J. HORN, JR.
Old Man Controversy (his father)	ERIC F. HODGINS
Miss Information (Sir Walter Humphrey's protégé)	PHILLIP ALDEN
Konstants Graft	H. C. GAYLEY
The Three Mosquitoes:	
Porthole	S. P. MCCONNELL
Oriole	T. N. BERLAGE
Enormous	T. S. WRAY
Professor Spofford	C. H. GREENWALT
Louis Derr	E. W. HAMMOND
Eddie Miller	R. W. HASKEL
Highball John	R. H. BROWN
The Dean	ERIC F. HODGINS

"Eric Hodgins, who had taken the part of the Dean, had hardly left the stage when Dean Talbot appeared. Many in the audience thought it was Mr. Hodgins so perfect had been the makeup.

"Dr. H. P. Talbot, '85, was the last speaker of the afternoon. He has followed the class through its entire course, and it was felt

that it was desirable that he be the last man to informally address the men. At the close of his speech the entire audience sang "Take Me Back to Tech" and "The Stein Song."

"The Class Day Committee consisted of D. F. Carpenter, chairman; J. L. Boyer and S. P. McConnell."

This then, was the end of Senior Week. The graduation exercises, held the next Monday, were in no wise under the control of the Senior Class. Many members of it wished desperately this were not so. But it was a Faculty affair completely. There was time for no more frivolity. The Committee had finished with the senior grades.

"LLOYD'S" PROVIDES TECH SCHOLARSHIP

ANOTHER scholarship has been established at the Institute, this time by the American Committee of Lloyd's Register of Shipping, for the value of five hundred dollars a year, tenable for three years.

The candidate will be selected on the results of the examinations in the freshman year, with due regard to personality and character. He will be required to complete the course in Naval Architecture and Marine Engineering, and his appointment will be subject to the approval of the American Committee of Lloyd's Register of Shipping.

THE GRADUATION EXERCISES OF THE CLASS OF 1922

A unique graduation — old Boreas among those present

THE graduation exercises of the Class of 1922 will probably linger more vividly in the memories of the seniors, their friends and relatives, the faculty, and the committee in charge of the exercises than any similar exercises for a good many past years. Not that the theses were better or the number of higher degrees granted larger. The graduation class was the largest in the history of the Institute, it is true, the faculty made a more respectable showing than usual on the platform, there was a larger audience than ever before — but these are not the reasons. The one event that will stick in the memories of the Class of 1922, that they will relate as gray-bearded grandsires to their grandchildren, was a simple event, almost unpremeditated. Merely — the tent blew down!

In view of last year's events when twice and thrice the Walker Memorial was called upon, on the hottest days, to hold far larger numbers than it was possible to seat comfortably, and in view of the size of the Class of 1922, almost large enough to fill the floor of Walker by itself, let alone sisters, cousins and aunts, the faculty committee on graduating exercises decided to hold the exercises out of doors, as was done in 1917 before Walker was completed. The Administrative Committee suggested that the uncertain weather of June made a covering advisable and suggested a tent. The Bursar found that a brand new tent could be rented, seating two thousand five hundred, twice the capacity of Walker Memorial, could be set up in the Great Court, furnished with a sounding board designed by the Physics department, and so easily solve the problems of seating and acoustics that make Walker so exasperating for any committee planning for a large ceremony.

Use of the tent was offered the Senior Class Day committee, facing the same problems, and gladly accepted. It was set up on Friday June 9, and served for the rehearsals of the Class Day and Graduation exercises as well as for the Class Day events on Saturday afternoon, June 10. Small as it seemed viewed from without, lost in the deserted spaces of Eastman Court, it proved to seat fully two thousand five hundred very comfortably and to have almost perfect acoustics. This was proved on Class Day afternoon, a damp and chilly, but otherwise good day.

On Sunday afternoon while the seniors were hearing their Baccalaureate sermon in Trinity Church, Boston was visited by one of the worst thunder storms of wind, rain and hail it had known for years. From New York up the coast to Boston the damage was tremendous. It is not surprising that the tent collapsed, destroying the platform and

sounding board. Major Smith, superintendent of buildings and power, got hold of every man on his staff and under the direction of a few tent men from the company that owned it, the work of reparation was begun. By two A.M. the tent was up again, with new poles where they had snapped before, and work was begun on relocating two thousand five hundred chairs. At eight the next morning all was in the place and carpenters were repairing the platform, and rebuilding and repainting the sounding board, so that by ten or eleven the florist could begin decorating and the thesis readers of the afternoon could try their voices against whistling wind and flapping canvas. It was a perfectly clear day, cool, sunshiny, deep blue sky and racing white clouds, and a brisk wind. By noon the big tent was in perfect order, with poles and ropes tested, and canvas sides arranged to give least resistance to the wind. Under the direction of Major Smith and his assistant Mr. Fred G. Hartwell and a corps composed almost entirely of Institute workmen, this job, a whole night's hard work rapidly and successfully completed, redounds greatly to the credit of the Technology department of buildings and power.

By half past two, when the senior class marched in from Walker Gymnasium where the members had assembled, every seat was occupied and many were standing at the back. The members of the Corporation and Faculty entered the tent by a door in the back and took their places on the platform and the exercises began, to the accompaniment of blasts of wind that set the canvas billowing and occasionally lifted some of the side poles from their positions. Every available man was stationed outside the tent, at poles and stakes, and those in charge of the tent, both from the company and the Institute, patrolled the outside, plainly anxious, as were obviously some of the Faculty on the platform. The wind had risen steadily since noon and in the enclosed cup of the Great Court the air currents apparently formed a maelstrom. Professor Warner would know!

The exercises had been lengthened by the very slow entrance of the large senior class and by the inclusion of a new item in the program, an address by Col. John B. Christian, of the department of military science, to those seniors who were receiving their commissions as second lieutenants in the reserve, followed by the administering of the oath. These lengthened the program so that at the hour by which the exercises had been concluded the year before, the degrees were just being given to the candidates for the degree of Ph.D.

Came an unusually heavy gust of wind, a sharp crack, and two of the smaller poles snapped; the tent began to settle and it was feared the main pole might go and let the canvas down upon the audience. Admirable order was maintained, the tent was cleared with surprising speed, students and workmen holding up the broken poles till every one was safely outside. In all the crowd there were two injuries, and those, though painful, not really serious.

The Graduation Exercises then adjourned to the colonnade at the head of the Court. There the Class of 1922 received their degrees

al fresco. It made a novel and a rather pretty picture. In the shadow of the colonnade stood Dr. Thomson, acting president, and Professor Miller, chairman of the Faculty. At the foot of the steps clustered the men. The diplomas carried into the main lobby for safe keeping were relayed out by the Registrar and the Secretary of the Faculty. Under the colonnade, on the steps, on the fringes of the crowd of young men, clustered and billowed women and girls, mothers and sisters and sweethearts, and an occasional father, watching the gay ribboned bundles of diplomas handed down and received, while Dr. Thomson read the magic formulæ. So there, under the blue sky, in the afternoon sunshine and wind, the act was accomplished, after which everybody trooped over to Walker, where in the great main hall they talked, laughed, congratulated, lost each other, found each other, ate punch and cake, said good-bye, broke up, and drifted away group by group, couple by couple, family by family — never to meet again, all of them, as a class.

The exercises were, as usual, simple, following the Technology tradition. Thesis abstracts, address by the acting president, Dr. Elihu Thomson; brief address by Colonel Christian, administering the oath of allegiance to the R. O. T. C. graduates; presentation of diplomas. The readers and their subjects were as follows:

Benjamin Warder Thoron, A.B., Civil Engineering, "An Efficiency Test on Hydraulic Turbines under Operating Conditions"; Horace Winslow McCurdy, Mechanical Engineering, "Douglas Fir"; Philip Merriam Alden, Electrical Engineering, "Proposed Hydro-Electric Development on the Namsket River for the Town of Middleboro, Massachusetts"; John William Strieder, Biology and Public Health, "The Source, Method, and Prevention of Mold Infection of Bread in Bakeries"; John Wheeler Church, Chemical Engineering, "The Study of the Film Coefficient of Heat Transfer between Solid and Boiling Liquids"; Edward Colson Fales, Engineering Administration, "Analysis of the Position of the Middleman in the Distribution of Fine Papers."

All in all, it was a most notable, exciting and interesting graduation, and the editor of the REVIEW heartily congratulates the Chairman of the Committee on Graduation Exercises on its successful completion. He had a good alibi. At least, he can't be blamed for the wind!

—R. E. R.

PROMOTIONS AND APPOINTMENTS FOR NEXT YEAR

The Corporation approves a long list of changes in the teaching personnel

ALTHOUGH no announcement was made as to a new president for the Institute, the Corporation at its regular quarterly meeting this spring, approved a long list of important changes in the staff.

Four important resignations were accepted: Professor Hofman of the Department of Mining and Metallurgy, retires after thirty-seven years of active service, since 1885; Professor Alfred E. Burton, on leave of absence for this last year, resigns and has been appointed "Professor Emeritus;" Professor H. P. Talbot, '85, resigns as head of the Department of Chemistry; and Professor E. B. Wilson, head of the Department of Physics, resigns to accept a position on the Harvard Faculty.

Since the meeting of the Corporation, we understand there have been two more resignations. Professor Warren, of the Department of Geology and head of Course IX, resigns to accept a position as Dean of the Sheffield Scientific School at Yale; and Professor Walter Humphreys, Registrar, resigns to enter business.

The following is the list of changes:

PROMOTIONS

To Heads of Departments:

Prof. C. L. Norton, Department of Physics.

Prof. S. C. Prescott, Department of Biology and Public Health.

To the Grade of Professor Emeritus:

Dean Alfred E. Burton.

To the Grade of Professor:

R. P. Bigelow to Professor of Zoölogy and Parasitology.

R. R. Lawrence to Professor of Electrical Machinery.

H. W. Shimer to Professor of Paleontology.

To the Grade of Associate Professor:

E. E. Bugbee to Associate Professor of Assaying and Metallurgy.

J. W. Howard to Associate Professor of Topographical Engineering.

R. G. Hudson to Associate Professor of Electrical Engineering.

H. H. W. Keith to Associate Professor of Naval Architecture.

W. V. Lyon to Associate Professor of Electrical Machinery.

W. H. McAdams to Associate Professor of Chemical Engineering.

E. B. Millard to Associate Professor of Theoretical Chemistry.

George Owen to Associate Professor of Naval Architecture.

L. S. Smith to Associate Professor of Theoretical and Applied Mechanics.

G. W. Swett to Associate Professor of Machine Design.
D. S. Tucker to Associate Professor of Economics.

To the Grade of Assistant Professor:

Dean Peabody to Assistant Professor of Applied Mechanics.
W. P. Ryan to Assistant Professor of Chemical Engineering.

To the Faculty:

The following instructors have been added to the Faculty:

H. E. Lobdell (Assistant Dean)

M. R. Copithorne

M. P. Horwood

W. A. Liddell

H. W. Underwood, Jr.

To the Grade of Instructor:

E. G. Bangratz to Instructor in Electrical Engineering.

E. H. Ellms to Instructor in Chemistry.

Miss Louisa L. Eyre to Instructor in Physics.

Whitworth Ferguson to Instructor in Electrical Engineering.

James Harrop to Instructor in Chemical Engineering.

Ernest H. Huntress to Instructor in Chemistry.

Joseph K. Pearson to Instructor in Mechanical Engineering.

Miss Dorothy W. Weeks to Instructor in Physics.

Louis F. Woodruff to Instructor in Electrical Engineering.

I. N. Zavarine to Instructor in Mechanical Engineering.

NEW APPOINTMENTS

W. Spencer Hutchinson, Professor of Mining in charge of the Option in Mining.

A. C. Hardy, Assistant Professor of Optics and Photography.

Thomas Adams, Lecturer in Architecture.

J. S. Pray, Lecturer in Architecture.

C. Howard Walker, Lecturer in Philosophy of Architecture and History of Medieval Architecture.

L. Evans, Assistant Director School of Chemical Engineering Practice.

R. H. Gerke, Instructor in Chemistry.

R. E. Hodgdon, Instructor in Physics.

E. C. Kirkland, Instructor in English and History.

A. R. Knipp, Instructor in Physics.

J. S. Larsen, Instructor in Architecture.

J. G. Lee, Instructor in Aëronautics.

C. F. Lyman, Instructor in English and History.

L. F. Small, Instructor in Chemistry.

S. J. Bates, Research Associate in Physical Chemistry.

Norman Carter, Laboratory Assistant in Physical Chemistry.

Miss Helen Gill, Research Assistant in Chemistry.

RESIGNATIONS

Prof. H. O. Hofman retires June 30, 1922.

Dean A. E. Burton retired March 31, 1922.

H. P. Talbot (as Head of the Department of Chemistry).

E. B. Wilson (as Head of the Department of Physics).

M. D. Hersey, Associate Professor of Properties of Matter.

J. B. Baker, Instructor in Accounting and Business Management.

L. W. Conant, Instructor in Business Management and Accounting.

T. S. Derr, Instructor in Mechanical Engineering.

G. M. Denkinger, Instructor in Physics.

H. B. Gardner, Instructor in Electrical Engineering.

A. Goldsmith, Instructor in Electrical Engineering.

M. E. Hurst, Instructor in Geology.

W. H. Ingram, Instructor in Mathematics and Physics.

C. N. Jacobs, Instructor in Chemistry.

P. H. Kelsey, Instructor in Modern Languages.

R. B. Lindsay, Instructor in Physics.

R. D. McIntire, Instructor in Chemistry.

C. J. Muller, Instructor in Geology.

C. R. Park, Instructor in Chemistry.

C. W. Pipkin, Instructor in English and History.

E. G. Plowman, Instructor in Economics.

C. C. Stewart, Instructor in Chemistry.

J. J. Sexton, Instructor in Modern Languages.

J. A. Thaler, Instructor in Electrical Engineering.

Roberts Tapley, Instructor in English and History.

P. B. Taylor, Instructor in Physics.

D. K. Worcester, Instructor in Physics.

P. C. Benedict, Assistant in Mining.

A. L. M. Dingee, Assistant in Chemistry.

Thomas H. Frost, Assistant in Chemical Engineering.

V. G. Gahnkin, Assistant in Mechanical Engineering.

David H. Harris, Assistant in Physics.

William A. Hoops, Assistant in Chemistry.

W. S. Johnson, Assistant in Chemistry.

G. W. Kenrick, Assistant in Physics.

George B. Lamb, Assistant in Physics.

Herbert N. Leisk, Assistant in Drawing.

R. E. Manley, Assistant in Chemical Engineering.

William H. Miller, Assistant in Aëronautics.

John T. Nichols, Assistant in Physics.

Spencer W. Prentiss, Assistant in Chemistry.

George H. Rhodes, Assistant in Chemistry.

A. F. Spiehler, Assistant in Chemical Engineering.

Harold V. Atwell, Research Associate in Applied Chemistry.

Ernest C. Crocker, Research Associate in Applied Chemistry.

W. R. Hainsworth, Research Associate in Chemistry.

Verner V. Kendall, Research Associate in Applied Chemistry.



Ye Craftsmen Studio

WALTER HUMPHREYS, '97

Who Has Resigned as Registrar of the Institute

INSTITUTE'S REGISTRAR RESIGNS

PROF. WALTER HUMPHREYS, registrar of the Institute and secretary and treasurer of the Alumni Association and editor of the TECHNOLOGY REVIEW in 1899 has resigned from the Institute staff effective June 30 last to become secretary-treasurer of the National Association of Wool Manufacturers. Inasmuch as his new offices are at 50 State Street, Boston, he will be able to continue as an officer of the Alumni Association for the present at least. For the present Prof. A. L. Merrill will be in charge of the registrar's office and will be assisted by Mr. J. C. MacKinnon.

Graduating from the Mechanical Engineering Department in the class of 1897, after travelling in Europe for some time he entered the employ of the Boston and Maine Railroad in the Motive Power Department, resigning after a short while to take up work in heating and ventilation with Prof. S. Homer Woodbridge, '79. This organization later became a part of Stone & Webster, but Professor Humphreys returned to Technology in 1899 to become assistant to Dr. Harry W. Tyler, '84, then secretary of the faculty. Upon the reorganization of the administrative departments of the Institute, he became registrar in 1902, which position he has held until the present. During this period he has also taught some classes in mechanism in the Mechanical Engineering Department but since the Institute moved to Cambridge his executive work has prevented the continuance of teaching.

In 1906 he was elected secretary of the Alumni Association and has served continuously since that time under the administrations of sixteen presidents. According to the by-laws of the Association the secretary is a member ex-officio of all committees and he has therefore been intimately in touch with all of the problems which have come before the Alumni Association in the last decade and a half.

As an undergraduate he was vice-president of his class, a member of the Board of Technique 1897 and secretary of the Institute Committee. He is a member of the Delta Kappa Epsilon Fraternity.

For the past six years he has been secretary of the Society of Arts and has developed the series of popular scientific lectures given by members of the Institute Faculty to the school children of Boston and vicinity. In connection with this it is interesting to note that he has been a member of the Brookline School Committee since 1913 and its chairman since 1916. He was also elected to the Board of Trustees of the Boston Public Library in 1915 and is now secretary of the board.

He became a director of the Harvard Coöperative Society with two other Technology men soon after the establishment of the Technology Branch of the Society in 1917, and has been secretary of the board since 1918.

As a charter member of the American Association of Collegiate

Registrars he has always been active in its work, holding various offices, including the presidency in 1915-16. He was a member of the Executive Committee of the Association of Alumni Secretaries and was treasurer of this Association during the war. His other war work was as a lecturer on astronomy in the United States School of Military Aeronautics at the Institute and as treasurer and member of the Executive Committee of the Junior Red Cross of the Metropolitan District.

In Mr. Humphreys' new work he joins an organization which has been in continuous existence since 1864 and which has been referred to as "of the utmost value to the wool manufacturers." Its membership is composed of individuals and firms connected with or interested in the wool manufacture of the United States and among its activities are the publication of a quarterly bulletin on subjects of interest to members, monthly statistics showing the status of the industry and the *Annual Wool Review*, which latter is a widely accepted source of information giving a record of the industry's progress for the past year.

THE NEW HEAD OF THE PHYSICS DEPARTMENT

Norton,' 93, succeeds Wilson — expert in heat, has been connected with the school since his graduation

FOLLOWING the resignation of Prof. E. B. Wilson from the Institute Faculty, Prof. Charles L. Norton has been appointed head of the Department of Physics.

Professor Norton was a member of the Class of 1893 at Technology and has been connected with the Institute Faculty since his graduation. He was professor of Industrial Physics for some years and was recently made the director of the Division of Industrial Coöperation and Research which organization is charged with the administration of the familiarly known "Technology Plan." He will continue in this capacity in addition to his new duties as head of the Physics Department.

The greater part of his scientific work has been relative to heat, the study of high temperatures, heat insulation, and fire prevention. He was in charge of the Insurance Engineering Experiment Station maintained at Boston by a number of large fire insurance companies, and was one of the pioneers in urging the use of Portland Cement Concrete for fire-proofing. He holds patents on nearly a hundred inventions, relating, for the most part, to refractories and heat insulators, including asbestos shingles and asbestos wood.

He was associated with the architects in the building of the Conservatory of Music, being consultant on matters of acoustics, and in the building of the Museum of Fine Arts, on problems of illumination. Among the early work of Professor Norton, which is less known than his more recent researches, is a publication on the use of X-rays, he being one of the first to advocate the use of X-rays in connection with medical diagnosis.

Early in the war he devised a method and built a plant for producing metallic magnesium, until then almost entirely produced in Germany. As consultant for the Naval Consulting Board, the Inventions Board of the War Department and the United States Signal Corps, he was engaged in passing upon many inventions submitted for use by the army and navy.

As an officer and director he has been associated with numerous industrial companies operating his inventions, among them being the Norton Laboratories, the Asbestos Shingle Company, and the Fibre Corporation. He is a member of the American Academy of Arts and Sciences, the American Society of Mechanical Engineers, the American Chemical Society, the Physical Society, the American Society for Testing Materials, the American Association for the Advancement of Science, the Society for the Promotion of Engineering Education, the Technology Club of New York, and the Annisquam Yacht Club.

Prof. E. B. Wilson, whom Professor Norton is succeeding, has been head of the Department of Physics since his appointment in 1917, when he succeeded the late Prof. Charles R. Cross. Professor Wilson has resigned to become Professor of Vital Statistics at the Harvard University School of Public Health.

HATCH, '91, IS AUTHOR OF NEW ALMA MATER SONG

THE prize of \$200 for the new alma mater song has been awarded to Arthur E. Hatch, '91. It is given by Volume XLI of *The Tech*, The Combined Musical Clubs, Tech Show, and the Alumni Council, each contributing \$50. The winning song was chosen from a field of fifteen, few of which measured up to the expected standard. The new song is entitled "M. I. T." The music for it was written by Mrs. Hatch. Next year's competition has already begun and songs will be received at any time.

WILLARD E. FREELAND—A CORRECTION

The new professor of Marketing in Course XV

In the April issue we did a stupid thing. We wrote a nice piece welcoming Willard E. Freeland, the new professor of Marketing in Course XV,—and then got his name all wrong all through the article. We called him "Freeman," probably due to magnetic attraction from John R. Freeman, '76, who had considerable space in the issue. But his name is Freeland. He says so! Hence this reprint by way of tardy acknowledgment, apology, penance, abasement and self-humiliation.—*Editor.*

WILLARD E. FREELAND, who enters the course in business administration and the teaching profession as well, with his assumption, at the beginning of the third term, of the duties of full professor giving new courses on marketing and sales management, will bring to his work the knowledge and experience of a man who has since the age of fourteen been in business and who has never attended a college or professional school, except as a lecturer before the business schools of Yale and Harvard. He is also a well-known and sought-after speaker before engineering societies and business organizations.

Like Professor Schell, who has carried the course up to the present term, and following the plan used in many of the other departments, Professor Freeland will work on a part-time basis. He is conducting an outside consulting service and in this way will be able to bring to the students in his course the last word in marketing methods and conditions. Next year he will also offer an option in marketing methods.

Professor Freeland graduated from the Cambridge Latin School and prepared for Harvard, but because of the illness of his mother he was unable to continue his school work and went South with her. Returning to New England a few years later he was employed in a shoe factory as a chief accountant. He later went into the factory as a worker and became the factory superintendent. Because of his health he went on the road as a salesman and later became connected as sales manager with the Howard-Wesson Company of Worcester.

He later spent three years, first in the advertising department and later in the position of superintendent of sales production, with the Norton Company, also of Worcester, and one of the largest manufacturers of abrasives in the world.

The succeeding four years were spent with *The Iron Age* as an associate editor. During the war, Professor Freeland did much through this magazine in the spreading of information which would aid in

greater production. It was while working for *The Iron Age* that he came in contact with the Winchester Repeating Arms Company of New Haven, from which company he comes to the Institute.

The work which Professor Freeland did for the Winchester Company is looked upon by many as being the highest type of sales engineering. This company had increased its plant and personnel four times the pre-war size, employing twenty-two thousand persons. When the armistice came it was a problem to profitably use the equipment. After a very extensive study of the market the sales engineering department under Professor Freeland decided on some thirty-seven hundred items to be manufactured to take the place of the large war output of guns.

As soon as the work of the sales engineering department had become mere routine, Professor Freeland was given the position of superintendent of sales production, where he had charge of the sales forces in the field and the very extensive warehousing system built up by the company.

An hour's talk with Professor Freeland, preferably over the luncheon table, reveals a highly interesting and stimulating personality, with a background of wide and exact experience, an eager conviction in his attitude toward the teaching problem, and a profound sense of the human values in business and student life which makes one believe that "there ought to be a law" (to use a well-worn phrase) that nobody should be allowed to teach till he has put in ten or twenty years in doing something else as hard as he can. (Mr. Freeland has put in about thirty!) Then he will come to his job chock-full of facts as well as theories, enormously interested in the new job and the new approach, and full of a practical desire to relate his teaching and his work with the boys to the real world outside, of business or whatever line you will, as only the man who has been in it and of it can understand it.

Leastways, that is the impression made upon an academic person by the new professor of marketing. He started from the same preparatory school as the editor, which only goes to show how wide an angle two lines can make starting from the same point.

Besides his professional lecturing, Professor Freeland has learned the art of interesting, explaining, popularizing, holding the attention, — in short, the art of teaching — from years of newspaper work, first as correspondent for eastern Maine for a leading Maine paper and next as editor of *The Iron Age*, these jobs, however, apparently only as interim work in a long and crowded business life. A week's vacation in eleven years, I believe he said! And now he is combining teaching with a consulting practice and having a great deal of fun, apparently, in getting up lectures (brushing up, as he calls it), in getting next to the boys and putting them next, in these earlier stages of building up what he seems resolved to make the best marketing course in America.

That's the way all new professors start, of course, but Freeland has the dynamics to do it if he sets out to. A shortish, stocky man, round-headed, round-faced, bald, spectacles, intent brows, steady and

compelling eyes, strong mouth and chin, nervous, alert, very much alive. A pretty steady and consistent talker, anecdotal, humorous, personal, with a long and exact memory, a hopper full of facts, and a scholarly and practical interest in the laws and structures and anatomy of business. One of those men, half business man, half scientist, who are slowly dragging the business of America and the world out of the anarchism and chaos it is in, studying its form and function, striving for analysis and synthesis, for something more than empirical tinkering, moulding and shaping it until, some day, it becomes what it so sadly needs to be — a technology and a science. — *R. E. R.*

TECH MAN IS INSTITUTE OF ARCHITECTS' NEW PRESIDENT

THE American Institute of Architects, of which William B. Faville, '96, of San Francisco has just been elected the nineteenth president, was organized in 1857. Its first president was Richard Upjohn; and some others honored with that responsibility were Richard Hunt, Daniel H. Burnham, Charles F. McKim and George B. Post. The object was to unite the architects of the country in an effort to promote the æsthetic, scientific, and practical efficiency of the profession so that it might be of increasing service to society.

The institute is an organization of local chapters, ready to render assistance in public undertakings by personal service or as a society of trained professional men in their chosen work. For example, the San Francisco chapter was called upon to assist the procedure of the Panama-Pacific International Exposition leading to the architectural program. The members are held to high standards of practice and conduct as a safeguard for the financial, technical and æsthetic interests entrusted to them. They must be men of integrity as well as ability, for they guide the public in the design, not only of the public, but of the private building whose quality reveals the importance of the community in modern civilization.

Mr. Faville, who is the first president of the institute to be elected west of the Rocky Mountains, is a member of the firm of Bliss & Faville. He is a native of California and was graduated from the Massachusetts Institute of Technology at Boston. For five years he was affiliated with McKim, Mead & White, of New York. His son has executed many of the fine buildings of the city, such as the Masonic Temple Building, the Liverpool and London and Globe Insurance Building, the Columbia Theatre, the St. Francis Hotel, the James Flood residence, and the State Building now being erected on the Civic Centre. Mr. Faville was a member of the Architectural Council of the Exposition, and was the designer of the Great Wall which bound the whole design together.

J. M. LONGYEAR DEAD

Former member of Corporation — well-known mining capitalist

JOHN MUNRO LONGYEAR, a former life member of the Corporation, died at his home in Brookline, May 28, from a heart attack.

The story of the rise of Mr. Longyear, from a poor boy to one of the greatest capitalists and wealthiest men in the country, reads like a romance and is punctuated with many unusual and interesting events.

He was born in Lansing, Michigan, on April 15, 1850, son of John Wesley and Harriet (Munro) Longyear. His early education was obtained in the preparatory department of the Olivet College, at Georgetown College, and at Cazenovia Seminary. He early perceived the great wealth of the then practically unexplored wilderness, both in its timber and mineral wealth. He came into the limelight when, virtually unknown to Wall Street, he was made twenty-four times a millionaire by a simple stroke of the pen, when he leased his immensely valuable iron ore lands in the northern peninsula to the United States Steel Corporation. The lands contained 30,000,000 tons of iron ore and the lease totalled \$24,000,000.

In 1890, Mr. Longyear, then reputed to be the richest man in Michigan, entered into negotiations with the late James J. Hill for the lease of their combined holdings to the steel trust. Even before that time he was rated as a multimillionaire. Among his more recent activities was the development of the vast fields of coal that lie hidden only by a crust of snow at Advent Bay in the island of West Spitzbergen, in the Arctic. With a number of Boston's wealthy citizens, he organized and became the head of the Arctic Coal Company.

One of his most remarkable engineering feats was the taking apart of his palatial villa in Michigan, loading it on a train and transporting it, stone by stone, one thousand miles; and then putting it together again and presenting it as one of the most striking and beautiful mansions in Brookline.

At the time of his death he was a member of the Northern Michigan Forest Protective Association, the Lake Superior Mining Institute, the Upper Peninsula Development Bureau, the National Automobile Association, Boston Chamber of Commerce, the American Historical Association, and the Holstein-Frisian Association. His clubs were the Marquette of Detroit, Twentieth Century of Boston, Brookline Country and Huron Mountain, Michigan. His son, John Munro Longyear, Jr., graduated from the Institute in the Class of 1910 from Course III.

COURSES IN ARCHITECTURE GREATLY REVISED

Professional studies will replace much of technical work

REVOLUTIONARY changes in the work of the Department of Architecture at Technology are announced by Prof. William Emerson, head of the department. The course in architecture consists of two options, one leading to proficiency in architectural design and the other offering training in structural engineering. Both of these options have been rearranged so that emphasis is no longer so much on the engineering as on the cultural side.

"The tendency in all architectural schools," said Professor Emerson, "is to lengthen the courses. It is realized generally that the architect's profession is more of an art and less of a business. The architect does not now do the designing of his structural computations. He calls in a man who is trained in this branch and lets him do the figuring. That leaves him free for the study and research necessary in the evolution of design. Our aim in changing the curriculum in this school has been to provide all that an architect needs for the practice of his profession. We have ceased to regard it merely as a branch of engineering."

The proposed changes, Professor Emerson stated, were submitted to twenty prominent graduates of the department and their approval was secured before the Institute Faculty was asked to pass action on them.

Whereas in former years practically the entire first year in the option working toward architectural design has been given over to technical studies, under the new plan physics will be dropped entirely. In its stead such studies as architectural history and the theory of design will be stressed. In the second year mathematics will be dropped, to be replaced by applied mechanics. Applied perspective will also go by the board and further work in the theory of design will be required. A short course in the history of ornament will be introduced in the third term. In the third year, to be effective in 1924-1925, applied mechanics, applied perspective, architectural history and building construction, save for one short course in the third term, will be dropped, more construction design will be introduced, the work in design will be strengthened and new courses, such as modelling, landscape architecture, and theory of design, will be offered. In the fourth year, to be effective in 1925-1926, constructive design will be dropped and other courses, to be specified later, but bearing on the theory of more cultural training, will be added.

The essential changes in the work of this option include the elimination of the course in physics as such, and mechanics of simple structures in equilibrium (all that is needed by the architect) will be included in the course in applied mechanics. The reduction of the course in math-

ematics to one year, it is thought, will provide ample training for such subjects in applied mathematics as the architect requires. Simplification of the course in structural analysis and computation has been done with an eye to the need of the architectural profession. Professor Emerson considers it better to send out architectural graduates with the distinct understanding that they are not prepared to undertake any but the simplest construction than to attempt to give them a minimum but altogether inadequate foundation in science and engineering. The introduction of courses in theory of design, modelling, landscape architecture and town planning is in line with the broader conception of the architect's necessary training upon which the department is entering.

In the option which contains the more engineering work the same tendency has been preserved. Courses in the humanities have been introduced in so far as was possible without impairing the technical training for which the option was primarily intended. In this option provision has been made for coöperation with the School of Public Health of Harvard and students of the Department of Architecture at Technology will have the opportunity of electing courses there which fit in with the more specialized work for which they are preparing.

Exchange with the Harvard School of Architecture has also been worked out with Prof. G. H. Edgell, the new dean of that school. Students at the Institute will be allowed to obtain the benefit of such courses as that in the history of architecture, for example, and in return the Harvard students may have the benefit of such courses as town planning and the course of lectures called "architectural humanities," which was instituted last year.

THE M. I. T. SUMMER SCHOOL OF PUBLIC HEALTH

Cooperation with the State Division of University Extension

BOTH the Commonwealth of Massachusetts and the city of Boston have officially recognized the work done at the summer session of the Massachusetts Institute of Technology in the courses given under the auspices of the department of biology and public health. The State's recognition comes in the form of a certificate from the division of university extension of the Massachusetts Department of Education, awarded on the completion of either a course in biology or one in public health laboratory methods. The Boston school department will allow credit for professional advancement to Boston teachers taking this work.

The recent widespread interest in and rapid development of methods of health work in the public schools has created a demand for new courses specially arranged for teachers, school nurses who have teaching responsibilities and teachers of physical education who have classes in hygiene and public health. There has been a special demand for this sort of instruction at the Massachusetts Institute of Technology, where, thirty years ago under the late Professor Sedgwick, the first school in the country for the teaching of public health work was started, antedating the establishment of any other similar school by about fifteen years. Since that time more than one hundred men and women have gone out from Massachusetts Institute of Technology into various branches of public health work.

To meet this demand, Prof. C. E. Turner of the department of biology and public health has started a course in methods of teaching hygiene and public health in the public schools, designed for teachers and school nurses who have teaching responsibilities. The course begins with a brief statement of the organization and administration of school health work, but devotes most of the time to a detailed consideration of the subject matter and procedure in health teaching through the various grades. New methods of health teaching as they have been developed in experimental work, both by Professor Turner and by other health workers in various parts of the country will be described. These methods include teaching with motion pictures, story telling, scrap books, competitions, weight records, etc. There will also be time given over to special lectures, classroom demonstrations and to the study of clinics for the correction of faulty posture, faulty diet and other defects.

In addition, Prof. S. C. Prescott, head of the department, announces five other summer courses, including some for those who desire to become laboratory technicians and who wish preparation for more advanced studies in the public health field, technical training in bacteriology and public health laboratory methods.

One course in personal hygiene and nutrition not heretofore given will be under the direction of Prof. John W. M. Bunker. It will include a discussion of the practical aspects of the right use and proper care of the human body. Special attention will be given to food requirements with practical work in planning the diet. Posture, exercise, bathing, clothing, sleep, ventilation, mental hygiene, basal metabolism, maintenance, infant feeding and foods of the foreign-born are topics that will be considered in this course.

Another new course is one in sanitary science and public health under Professors Prescott and Turner. This will consist of twenty lectures amply illustrated with lantern slides and motion pictures supplemented by outside reading. It is designed to give a comprehensive view of health and disease parasitism, resistance and immunity, how germs attack and how we may secure protection against disease by vaccination and the use of anti-toxin. The broader aspects from a public health basis of water supply, waste disposal, food control and sanitation and the work of official public health agencies will be explained.

Still another new course is one in elementary bacteriology; a consideration of the role of micro-organisms in every-day life, which will be under the direction of Professor Bunker and Dr. M. P. Horwood. Many courses in bacteriology deal only with the relation of microbes to disease. This course has been designed to give the teacher or general student a comprehensive, well-balanced survey of the behavior of micro-organisms and the part they play in affecting the environment of mankind. While the relation to disease will be considered, special emphasis will be placed on such topics as the relation of bacteria to soil, water and foods, fermentation and its applications in the home and in industries, bread making, butter, cheese ripening, food preservation, water purification, refuse disposal, and soil fertility. The lectures will be supplemented by demonstrations and by laboratory work.

A course for which State and city credit will be given is the one in bacteriology, which has been planned with special reference to those who plan to follow bacteriology as a profession. The work will correspond in a broad way with one of the regular courses of the Institute and will include a fundamental consideration of the biology of the bacteria with a thorough study of selected types so as to prepare the student for advanced work in technical phases of the subject. Before this course is undertaken preparation in chemistry, biology and the use of the microscope is desirable.

The second course, which leads to State and city recognition, is one in public health laboratory methods given by Dr. Francis H. Slack. It is intended to be a practical course in diagnostic methods and other procedures employed in public health laboratories. Training will be given in laboratory diagnosis of diphtheria, tuberculosis, typhoid fever, malaria and certain other communicable diseases, and in the Wasserman and other complement fixation tests. This course is designed to be of value to physicians, laboratory technicians and those preparing for administrative positions in public health.

The summer session at Massachusetts Institute of Technology will be held this year from July 10 to August 11, following the Boston meeting of the N. E. A., and it is expected that many teachers from other parts of the country will take advantage of their presence here to enter the summer session at Massachusetts Institute of Technology.

MAJOR CHARLES W. HINMAN

MAJ. CHARLES W. HINMAN, '70, III, prominent among long-range marksmen in this country and England forty years ago, died May 26, 1922, at Jordan Falls, Nova Scotia, while on a fishing trip.

As a young man Mr. Hinman served in the Massachusetts militia, and later in life he was for several years on the Governor's staff as inspector of rifle practice, with the rank of major. He served as coach on a number of occasions for Massachusetts and New Hampshire teams in the national matches at Camp Perry. The Standard American target, now in use throughout the country on civilian rifle ranges, was designed by him, and he continued to control its manufacture.

Major Hinman was pre-eminently an out-doors man. He was born on a farm in Concord, Vt., April 11, 1849. As a boy his health was far from robust, and he was encouraged to spend his time in the open air. He took up trapping as a recreation out of school hours, and devoted the first money which the sale of his furs yielded to the purchase of an unabridged dictionary. His home, even then, was called "the armory" by the neighbors. During the last forty years of his life he devoted much time to big-game hunting and salmon fishing, in both of which sports he had remarkable success. He made annual trips to the woods in the hunting season, and to the streams of New Brunswick, Nova Scotia and Newfoundland in the seasons for salmon and trout.

While making his usual spring fishing trip on the Liverpool and Jordan Rivers in Nova Scotia, Major Hinman was attacked by his final illness. Chronic indigestion had affected the action of his heart. He received every care at the hands of his companion, Mr. Ira L. Fish, of Boston, and the two guides, one of whom had accompanied the Major on similar trips annually for fifteen years. He reached a settlement on the railroad, where he was attended by a physician, but he was unable to continue the journey home. His death came about ten days after the first attack of the final illness.

Major Hinman was a civil engineer and chemist. He graduated from the Massachusetts Institute of Technology in 1870, and taught chemistry there for a year. The office of State Gas Inspector was then created, and he received the first appointment, continuing in the office more than twenty years. He then engaged in the manufacture of gas meters, and was consulting engineer for the American Meter Company at the time of his death. He invented a number of gas appliances, including a station meter, for measuring total product of gas plants at the works. This latter machine is now in use throughout the country.

TECHNOLOGY'S COURSE IN AERONAUTICS

The work of Prof. E. P. Warner and his staff in all branches of aviation

EVERY phase of aeronautics, including advanced courses in the construction and design of an airplane, as well as a thorough grounding in radio and gas engines, is covered by air service instructors at the Massachusetts Institute of Technology, an institution leading all others in the United States in fostering and developing the study of aviation. Col. John B. Christian, C. A. C., a West Point graduate, is in command of the Reserve Officers' Training Corps at the Institute and has on his staff ten Regular Army officers, two of whom, Maj. John C. McDonnell and Capt. W. W. Wright, are assigned to the Reserve Officers' Training Corps air service unit. Prof. Edward P. Warner is at the head of the sub-section of the physics department which deals with aeronautical engineering and construction and to which army, navy and marine officers are sent for intensive training.

The work under Professor Warner embraces the complete design of two airplanes; the first designed being a training biplane carrying a one hundred and fifty horsepower motor. In this case the student is subject to great restrictions, but these are waived when he undertakes the plans for his second plane, for which he also devises a propeller. The class, which comprises civilians as well as officers, in addition, plans general drawings for non-rigid airships. Besides this work and lectures on the theoretical aspect of aviation, a large number of problems in the analysis of especially complex structures and in the general planning of airplanes for specific purposes, are carried out. Also, each member conducts a series of experiments with model planes in the Institute's wind tunnel in connection with his studies at the laboratory. Finally, the students perform original investigations, planned and directed by themselves, which are written up as theses. This course comes under the general supervision of Prof. E. B. Wilson, who is at the head of the physics department and is himself a strong exponent of aeronautics.

Technology is the only school to which military officers are being sent for this aeronautical engineering training, and since 1914, not including the years of the war, eighteen officers have been graduated. During the war intensive courses of fifteen weeks each were given and eighty officers graduated. It is expected that the Army and Navy will continue sending men to the Institute for this comprehensive course.

Professor Warner is a graduate of Harvard University, class of 1916, and of Technology, class of 1917. During the war he conducted research work for the Army at Technology and in 1919 he was appointed a member of the National Advisory Committee for Aeronautics, serving as chief physicist in charge of aeronautical research at Langley Field. In

the summer of 1920 he went abroad as the European representative of the board. In addition to his activities at Technology, he is giving a series of lectures to members of the Massachusetts National Guard air squadron and also the air service Reserve Officers' Training Corps unit at Technology.

Briefly, the Reserve Officers' Training Corps is a body whose function it is to train personnel for future commissions in the Officers' Reserve Corps. In time of peace the Officers' Reserve Corps furnishes a portion of the commissioned strength of the Organized Reserve and to some extent of the Militia and the Regular Army. In time of war the Officers' Reserve Corps will continue to furnish the commissioned personnel of the Organized Reserve and through that reserve to the other components of the Army of the United States.

In addition to the Air Service unit at Technology there are Coast Artillery, Engineers, Signal Corps and Ordnance units. During the first two years at the Institute, however, there is no distinction in the instruction given to the students belonging to the various branches. They are all pooled and a knowledge of subjects required by every branch of the service alike is acquired. At the end of the sophomore year the men are asked to decide definitely whether they desire to continue military training and if so in which branch they elect to specialize. Those who continue are required to devote three hours a week to study during the junior and senior academic years and in addition must attend one summer camp for a period of six weeks. Following their graduation from the Institute, each successful student receives a commission in the Officers' Reserve Corps.

The air service training camp will open this summer at Mitchel Field on June 15, and, according to the officers in charge at Technology, about thirty-five students will avail themselves of this opportunity to learn the practical as well as the theoretical in aeronautics. It is this summer camp which should prove of unusual interest to the embryo airman, since he will be given an intensive training that should more than familiarize him with a plane. In order to fit the students for this work, juniors at Technology who have selected the air service are now being subjected to a theoretical training, which embraces the following all important subjects: regulation of artillery fire from the air; how to coöperate from the air with infantry and cavalry; transmitting information and orders between the front lines and the rear, and reconnaissance, both photographic and visual. All this necessitates a knowledge of radio, telegraphy, navigation, map reading and sketching, photography, machine guns and aerial marksmanship — a general tactical knowledge, sufficiently comprehensive to enable the student to meet every situation that may arise.

Following this six weeks' summer camp training, the student upon entering Technology on his senior year is instructed with a view to preparing him for training as an airplane pilot. This includes a continuation of the work received upon the gas engine at the summer camp; the theory of flight; the history and development of aeronautics and a course

in aerodynamics, embracing the principles of airplane construction and design. By then he should be ready to report for active duty as a commissioned officer.

According to officers, this year's summer camp will be as interesting and as educational as funds and equipment allow. It is proposed to give each student approximately one hour of practical instruction in the air every day. During the first week there will be three flights given in order that the novice may become familiar with general air conditions; the appearance of the ground from the air at various altitudes, and with the many instruments, such as the air speed indicator, aneroid barometer, compass, etc., carried in the cockpit.

Especial emphasis will be laid upon aerial gunnery and this is made possible by means of the camera gun, which is modeled after the Lewis machine gun in form, weight and method of operation, the only difference being that when the trigger is pulled a photograph is snapped instead of a bullet fired. Films are contained in the magazine in place of ammunition and when the operator "fires" a picture is taken of the "hostile" airplane, showing its relative position with respect to the sights at the instant the gun was fired. This course will be progressive. At first no attempts will be made at maneuvers, the machines approaching or following each other at easy angles, and liberal time for sighting will be allowed the gunner. As the student gains in proficiency, and is able to swing the turret upon which the gun is mounted without difficulty, faster target planes will be used. These will dive or approach unexpectedly at difficult angles. Deliberate action will have to be replaced by instinctive coördination. Finally several "hostile" planes will act in consort, thus introducing not only the elements of surprise, but also mutual protection gained by formation. In other words, over Long Island this summer planes will attack each other as they once did in France, but the peaceful click of the camera will replace the report of a machine gun bullet.

The cross-country training that will follow this aerial gunnery will be a practical application of the instruction received at the Institute. After the student has learned to identify objects upon the ground by his map, has succeeded in estimating distances and is no longer lost in the air, he will be taught to make his own map, plot his own courses and direct his pilot over the ground that he wishes to traverse. Later the student will be taken to unfamiliar grounds and will be called upon to plot his way back to camp, with aerial attacks en route. This training is certain to develop self-reliance, resourcefulness and quick but sound decisions.

Photographic missions and visual reconnaissance will next be studied, and they will entail the same initiative. After taking into consideration the tactical situation as outlined by his instructor; the position of the anti-aircraft guns; the probable routes of friendly and hostile patrols, and the meteorological report for the day, so as to utilize to the best advantage the prevailing winds, the student will plot his course and, acting as if he were in command of the plane, direct

the pilot to the objective and fulfill the mission in his own way, exercising his own judgment if enemy planes should appear. The men will, of course, be shown how mosaics, such as the one recently published of Boston, are made.

The actual regulation of fire in coöperation with a battery of artillery will in most instances be impossible at summer camps due to inadequate facilities. When artillery troops are not available, a target will be laid out upon the ground and pots of powder, placed at measured distances, will be electrically discharged to simulate the burst of shells as they strike the ground. From the air, the student will observe the puffs of smoke, estimate the error in distance and give the corrected direction by wireless to the receiving station of the assumed battery. Infantry problems will have to be carried out along similar lines, also. Communication between the airplane and the ground will be through the firing of rockets, colored flares, Very pistols and dropped messages.

Lighter than air work will consist merely in giving the student one or more flights in a captive balloon or dirigible. Night flying and acrobatics will be demonstrated, but not participated in directly by the student body.

When not engaged in flying, students will be given instruction in ground work and, in order to vary the instruction and utilize to advantage facilities not available during the academic year, this branch of study will be carried on out of doors. Target practice with automatic pistols and clay pigeon shooting should be entertaining as well as instructive. In addition, the students will strip and reassemble motors and learn the different kinds of woods and metals used in an airplane, while they will also be taught the art of developing and printing the photographs that they have taken.

Neither will it be all work and no play. At least one hour a day will be devoted to some form of athletics, and in the evening there will be motion pictures illustrating professional subjects.

R. F. WARNER,
Boston Transcript.

A DOMESTICATED CAVE OF THE WINDS

A story of the Technology Wind Tunnel

BY E. P. WARNER, *Assistant Professor Aeronautics*

THE development of new types of aircraft is an undertaking necessarily fraught with hazard, although the danger even in such work is less than is popularly supposed by the lay public. No effort can be spared to reduce the danger to the lowest possible point and, in particular, as much as possible of the preliminary testing should be done on the ground rather than in the air. A pilot who has once taken an airplane off the ground and finds it to be unstable or unwilling to answer the controls is in a very unpleasant position, and the likelihood of such a happening should be reduced to the lowest possible point.

The methods of testing aircraft for structural strength on the ground are obvious, and it has long been common practice to take a sample airplane, invert it, and load the wings with sand in such a way as to simulate the upward pressure of the wings while in flight. The degree of safety of the machine can then be determined from the amount of sand carried before collapse occurs.

The various parts of the airplane, too, may be separately tested from a structural standpoint, but it is not so simple to test on the ground those features of the machine which depend directly on the action of the air against the parts of the airplane in flight and which are quite as important for safety as is a sufficiency of strength.

The only avenue of approach to the investigation of air forces and of steadiness of motion and effectiveness of control without the necessity of constructing and flying the airplane is furnished by the wind tunnel. A wind tunnel is a long tube through which air is blown at a known speed and in which there is placed a very exact model of the airplane to be tested. It is then possible for the aeronautical engineer, knowing the speed at which the air travels through the tube and speed at which his finished airplane is to fly, and knowing also the relation between the sizes of the model and the full-sized airplane, to predict with considerable accuracy the forces coming into play on the airplane. This knowledge enables him to calculate the speed at which the machine must fly to sustain itself and the horsepower that will be required to drive it through the air at that speed.

The oldest aeronautical laboratory in the United States, from the point of view of continuous service dating back from the present time, is that of the Massachusetts Institute of Technology. The first wind tunnel erected at the Institute was put into service early in 1914. The tunnel has been moved since that time and the original tunnel has been destroyed and replaced by another of more modern and efficient design,

but the continuity of service has never been interrupted for more than four weeks.

The original wind tunnel, which was extensively described in the press during the first years of its operation, was constructed under the supervision of Commander J. C. Hunsaker, United States Navy, then in charge of aeronautical instruction at the Massachusetts Institute of Technology. It was four feet in diameter and the air was drawn through by a propeller fan placed at one end, an air speed of nearly forty miles an hour being secured with the expenditure of about fifteen horsepower. The years that have intervened since 1914, however, have brought fresh knowledge of wind tunnel design as of everything else connected with aeronautics, and it has been found that by changing the form of the tunnel the efficiency can be much increased. In order to take advantage of these developments, the old wind tunnel was destroyed and a new one erected in the same building during the fall of 1921. The wind tunnel now in operation at the Massachusetts Institute of Technology is, like the original one, four feet in diameter and the power used is the same, but the gain in performance has been such as to increase the speed from forty to sixty-five miles per hour. The speed can, of course, be regulated to any lower value desired, down to two miles per hour. The most evident of the changes which have led to this great improvement have been the shortening of the straight tubular part and the addition of long flaring ends and the use of a larger propeller. The sectional form of the tunnel has also been changed from square to circular.

The construction of wind tunnels in the past has been carried out by a variety of methods, the most common practice having been to use wood throughout. Occasionally ventures have been made in the employment of sheet metal and of wooden frames lined with fabric. The construction of the new plant at the Institute of Technology, however, is quite different from anything that has gone before. One end of the flaring tube, the end at which the air enters, is made of plaster worked to form with great accuracy by hand and varnished and polished after finishing. On the other side of the center, towards the propeller, the construction is of built-up wooden frames covered with thin sheets of wood made of three veneers glued together. The whole tunnel is therefore exceedingly lightly and cheaply constructed.

In the new tunnel, the model to be tested is supported on a balance placed outside the air stream and projecting through a hole in the floor. The balance is much like any other pair of scales except for a somewhat greater complexity and greater range of adjustment and it permits of direct weighing of the lift and resistance of the model mounted inside the tunnel. The wind speed is kept constant by an automatically regulated device and a model can be completely tested and the data for the prediction of the performance of an airplane thereby secured in about two hours' work by two men.

Great care is necessary in making the models for wind tunnel tests, as the accuracy required goes up as the size goes down. The models of

wings are generally constructed of metal and are required to conform to the prescribed dimensions with an error of less than one five-hundredth of an inch, literally within less than a hair's breadth. The cost of a model is, to be sure, far less than the cost of the full-sized airplane would be, but it is nevertheless much more than the uninitiated supposed, and as much as one thousand dollars is sometimes expended on one of these models not more than two feet across.

The stress which has come to be laid on the value of laboratory testing as a preliminary to the construction of airplanes is best evidenced by the large number of wind tunnel tests conducted for or by the Army and Navy. In fact, nearly all of the Army's airplane designs are at some time tested in the wind tunnel and there has existed for over four years an arrangement whereby the laboratory of the Massachusetts Institute of Technology has run large numbers of such tests for the Army Air Service.

Although the most common use of a wind tunnel is to test models of complete airplanes, this is not by any means the only purpose for which it can be employed, and the experiments conducted at Massachusetts Institute of Technology aeronautical laboratory during the past few years have covered a startlingly wide range extending quite outside the field of aeronautics on some occasions. The aeronautical tests make up by far the largest part of the total and include tests to determine the forces on every separate part of an airplane or airship as well as on the aircraft as a whole. They extend also to tests of propellers, and to measurements of the resistance of bombs and other articles employed in connection with flight. Quite beyond this, however, the tunnel has been found of service for objects so diverse as the measurement of the wind pressure on buildings, so furnishing data for the prevention of such catastrophes as that which overtook the Knickerbocker Theatre, and for the measurement of the rate of evaporation of liquid from a surface. In this way, information is obtained as to the necessary allowance for evaporation from a reservoir when a wind blows over it. Also tests may be made on the air resistance of automobile bodies, both to obtain the maximum of speed with the minimum of power, particularly in racing cars, and to indicate the flow of air around the body of the car and the extent to which dust is likely to be stirred up by its passage. Another application to automotive vehicle design is found in the testing of motorcycle and other air-cooled engines to determine the effectiveness with which the cylinders are cooled in known wind. The wind resistance of ships also has been measured and found to make up an important part of the total resistance to be overcome in driving a high-speed vessel through the water. Finally, inventors of golf clubs and tennis rackets of eccentric forms have turned to the wind tunnel to find out how much resistance their implements offer to passage through air and how much advantage, if any, they offer in ease of swinging at high speed by comparison with the older forms.

TEACHING MUSICAL APPRECIATION AT TECHNOLOGY

In our last issue we told about the students' point of view on the new general study courses in musical appreciation given by Penfield Roberts, music critic of the *Boston Globe*, and instructor in the department of English and History at the Institute. The following is Mr. Roberts's own view of the course as published in his own column in *The Globe*.

THE present writer has been teaching classes in musical appreciation at the Massachusetts Institute of Technology during the school year now ending. Some of the conclusions arrived at as a result of the experiment may interest those who like to read about things musical.

The students, with some exceptions, had no previous musical training of any sort. The music they had heard before taking the course was what the churches, the dance halls, the movies, and last, but far from least the family phonograph and piano player had offered them. Out of eighty-six answers to a questionnaire about their favorite pieces, not more than ten answers showed liking for the great classics, and not more than ten confessed to a fondness for jazz. Rachmaninoff's C sharp minor Prelude, Kreisler's Caprice Viennois and similar near-classics predominated with the Sextet from "Lucia," "Miserere" from "Il Trovatore" and such like operatic pieces thrown in for good measure.

Many of the answers probably must be discounted, since although assured that the instructor himself preferred jazz to musical gum drops, the students may have felt that a music critic could not really like anything but "classical music." The appreciation they needed to learn was seemingly a preference for Beethoven over Carrie Jacobs Bond, rather than over Irving Berlin. They needed to be taught to prefer Chopin to his imitators, the best to the fourth-rate imitation. Not jazz, but salon music and Italian opera proved the things from which the budding engineer needed to be weaned.

It was open to the instructor to take up all the class time in preaching as eloquently as he could the wickedness of Ethelbert Nevin and Mascagni and the great virtues of Bach, Wagner and Debussy. It was also open to him to give a scientific impersonal summary of the nature and development of music, crammed with as many facts out of Grove, Helmholtz, the Oxford History of Music, etc., as he could cram into his own mind, or onto his own lecture notes. He might also try to make the class discuss its musical preferences and experiences. He might urge, and even require, as he did, attendance at a concert or two. He might make the men read and memorize histories of music. Finally, he might try to give in class some sort of musical performance.

The methods used were a compromise between all the above attitudes, with music in class more and more predominating as time proved

it the best means to the desired end. The music chosen was phonograph and reproducing piano records giving as satisfactory reproductions as could be found of the actual performance of great artists. Amateur and semiprofessional pianists and violinists were also utilized now and then for actual human performance, but the results were, on the whole, inferior to the machine versions of the great performers' work.

The music chosen was the crucial point. It proved hopeless to get most of the men to like either Bach or Haydn. Mozart, too, they thought sounded "like my kid sister playing finger exercises." Beethoven's "Appassionata Sonata," after many repetitions, succeeded in winning over at least half the class to a genuine liking for it, though at first there were requests for something easier. Chopin, Schubert, Liszt and Debussy proved the most popular of other composers represented. The Boccherini Minuet was the only eighteenth century piece most of the class seemed to enjoy. Of twentieth century works Ravel's "Jeux d'Eau" did not find favor, but Dett's "Juba Dance" naturally was the greatest popular success of any piece chosen, at a first hearing.

The music in such a course ought to be played more than once, which means abandoning the idea of giving illustrations of every composer in all his phases. It is more important to get men thoroughly accustomed to listening to twenty-five pieces of standard music really well played, than to let them hear five hundred twenty-five pieces once apiece. The records for phonographs and reproducing pianos vary greatly in the excellence of the performance. The teacher of appreciation cannot choose deafly.

It is a great temptation to play to the gallery by choosing pieces sure to please any audience at a first hearing, and equally sure to pall at a tenth hearing. But these men did not need to be taught to like "Caprice Viennois," whereas they did need to be taught to like Beethoven. No amount of words about Beethoven could have done what Harold Bauer's excellent roll of the "Appassionata" did for the class. Most of them would always stay through this or any piece of music that was playing at the end of the hour, though told again and again that the ringing of the bell ended the class and left them free to go, whether or not the music was still playing.

The net result of such an experiment in teaching appreciation is to make the teacher feel that he should let the music speak for itself as far as possible and try to supply only a minimum amount of critical and technical knowledge. If the chosen music is of the best, it will really do its work with the majority of the students. After giving such a course once the teacher will probably feel that when it is repeated he can make it one hundred per cent better, and that he is perhaps the person who learned most by the first presentation of it.

WIRELESS LIGHT RESEARCH AT THE INSTITUTE

A RING of soft orange light, with no wires leading to it and glowing in the darkness, sets up an interesting train of speculation as to the illumination of the future. Nobody supposes for an instant that our lighting problems have been solved. Compared with what the future will bring forth the present arrangement of wires with bulbs that have to be screwed into their sockets and renewed frequently is cumbersome and inefficient. Research work at the Institute has succeeded in producing a light without wires; that is to say, the incandescence is set up by induction, where the electric current bridges an interval purely by electric energy. To be sure the light is only an experiment and so far is not practical for commercial purposes, but the method has possibilities.

The research division of the department of electrical engineering experiments with a tube filled with neon gas have been carried to the point where the tube has been caused to give out light, although no wires have been attached to it. In the ordinary form of electric illumination the light is usually produced by an incandescent form of filament or by carbon electrodes. The life of both of these types is limited by the burning out of the incandescent element. Of course, in the case of the arc lamp this can be easily renewed, but at the cost of frequent trimming. The type of incandescent bulb in common use has been improved through the substitution of tungsten for the carbon filament. Several types of lamp using incandescent vapor have been developed, and have been used both experimentally and commercially. The Moore light used very long tubes filled with carbon dioxide or nitrogen, which were caused to glow through the discharge of a high voltage electric current through the glass. This type was not much used commercially, but a similar lamp known as the Cooper-Hewitt mercury vapor lamp is at present in general use in a great variety of places, among them the motion-picture studios. Both of these types require electrodes, or terminals, sealed in the glass, but they have a long life because there are no parts which wear out or burn out.

The experiments conducted at the Massachusetts Institute of Technology used a glass tube closed upon itself in the form of a ring. This ring was slipped over an iron core wound with the proper number of turns of wire through which alternating current was caused to flow. The magnetism, passing through the glass tube, then induced a voltage in the gas contained therein, and if the parts were properly proportioned this voltage ionized the vapor and caused it to glow, giving out light in a similar manner to the Moore and the Cooper-Hewitt lamps, but of a pleasing orange color. Neon gas at a low pressure was used, since it has desirable characteristics for this purpose, and a high-frequency current of about three hundred thousand cycles was employed to excite the transformer.

The new lamp is only in the experimental stage at present and the amount of light given out is not large, but the possibilities are interesting, it could be commercially made in the form of a standard fixture around which the glass tubes could be slipped. The lamp will last indefinitely unless the glass is broken, and then it is only necessary to slip a new tube in place, no electrical connections being required. The quality of the light is soft and pleasing, and as it is not of a high intensity it does not strain the eyes.

CORPORATION REDISTRIBUTES STUDENT TAX

More money for athletics — Institute will finance Walker

As a result of a meeting of the Executive Committee of the Corporation held on April 18, a radical change in the distribution of the student tax is to go into effect next year, resulting in the allotting of a much larger share to athletics and in the underwriting of the Walker Memorial finances by the Corporation to the extent of \$15,000 a year. The action of the committee follows a long series of discussions as to the advisability of raising the tax next year; but it has finally been decided that, due to the change in conditions, a satisfactory arrangement can be made by re-apportioning the funds rather than by raising the tax, which is to continue at nine dollars next year. The resolution passed is as follows:

By the Executive Committee of the Corporation of the Massachusetts Institute of Technology, Voted: That during the next two academic years the student tax shall be continued at the present rate of nine dollars per year; that during this two-year period, the distribution of the student tax shall be: Athletics, five dollars and thirty cents, Walker Memorial, one dollar, Medical Department one dollar, classes seventy-four cents, reserve sixty cents.

This redistribution of the tax means an increased allotment of three dollars per student to athletics, and a decrease of about the same amount in the proportion used for the maintenance of Walker Memorial.

Due to the change in conditions, the maintenance expenses are not expected to be as heavy as in previous years, and the net charge of approximately fifteen thousand dollars per year has been generously underwritten by the Executive Committee. It is believed by the committee that this arrangement, which is not to react financially on the student body in any way, will provide the most satisfactory solution of the present conditions. Bursar Ford has suggested that it may provide also a solution of the much-debated question of what becomes of all the five-dollar fees.

M. I. T. A. A. APPROVES ATHLETIC ELECTIONS

THE Executive Committee of the Massachusetts Institute of Technology Athletic Association received the reports on track, crew, tennis, golf, and rifle at its last meeting and passed most of the recommendations and nominations made by the retiring managers. P. A. Herrick, '23, will be the manager of track, and George Swartz will be in control of the cross country team next fall.

W. S. Hungerford, '24, was approved as crew manager and the election of H. R. Greatwood, '24, to the captaincy of crew was accepted. L. L. Tremaine has been named tennis captain and P. H. Littlefield, '24, will fill the position of tennis manager. The manager of golf is to be W. H. Van Dusen, '24. Right Wing H. L. Hayden, '23, was approved as hockey captain. J. Y. Lund's report on rifle, carrying recommendations of C. O. Duevel, Jr., '24, as manager and R. E. Rubins, '23, as captain, was received and passed.

An award of straight "T" to the following athletes was approved by the committee and will be presented to the Massachusetts Institute of Technology Athletic Association: W. R. B. Scott, '22, and R. D. Carver, '22, in tennis; E. E. Sanborn, '22, R. E. Hendrie, '23, and A. R. Tonon, '23, in track; H. W. McCurdy, '22, J. C. Molinar, '22, and W. B. Driscoll, '22, in crew.

The report on track by M. N. Waterman, '23, who presided at the meeting as the new president of the Massachusetts Institute of Technology Athletic Association, carried by far the largest number of recommendations. The election of next year's captain in the Institute's major sport is now being carried on but the results will not be announced until the approval of the Athletic Association has been secured next fall. Phil Herrick, the new manager, was in charge of Field Day last fall and entered competition for the position he will now hold, shortly after entering Technology.

George Swartz, manager of cross country, was the second of the sophomore assistant track managers. He has been connected with Tech Show but has spent most of his time in the track contest. With many veterans, including Bob Hendrie and Elmer Sanborn ready for duty next fall, and a number of first class freshmen and runners who just missed varsity posts this fall the chances seem to be that George will handle a successful team.

W. W. Northrup and J. Q. duPont were selected as the sophomore assistants in track. These two men will only be retained from the freshman turn-out and will compete during the next year for the managership of track.

The following runners will receive an "aTa": E. W. Blodgett, C. Y. Chittick, E. E. Sanborn, L. H. Poor, C. E. Snow, A. R. Tonon, H. W. Dexter, M. F. Sheldon, E. J. Heap, W. N. Webster, A. D. Smith,

A. L. Flanders, P. M. Stearns, R. L. Hershey, W. B. Greenough, E. A. Merrill, Tyson Nimick and C. D. Dippel.

The recommendations for the 1922 numeral awards for the following be approved: W. B. Gurney, J. W. Poole, A. G. Hayes, C. Y. Chittick, E. E. Sanborn, W. K. MacMahon, Garvin Bawden, T. H. Gill, A. L. Flanders, A. S. King, C. G. Dandrow, F. H. Osborne, A. R. Tonon, M. F. Sheldon, L. P. Botting, J. W. Kellar, R. H. Blatter, G. T. Boli, W. D. Pinkham, E. A. Merrill, H. P. Stanley.

The recommendations for the 1923 numerals awards for the following be approved: W. L. Smith, E. J. Heap, C. K. Miller, L. H. Poor, C. E. Snow, R. E. Hendrie, R. L. Hershey, H. W. Dexter, A. A. Parker, W. N. Webster, C. D. Dippel, A. C. Stewart, W. B. Greenough.

The recommendation for the 1924 numerals awards for the following be approved: G. R. Holt, E. D. Lucy, L. F. Porter, E. H. McArdle.

The recommendation for the 1925 numeral awards for the following be approved: C. M. Boardman, J. E. Russell, C. C. Marble, G. L. Leness, G. L. Bateman, F. M. Bemis, J. M. Campbell, E. H. Holmes.

The following received 1925 track numerals: G. W. Leness, G. A. Drew, G. L. Bateman, W. R. Mechterberg, J. E. Russell, R. W. Parkinson, J. M. Campbell, E. M. Tolmes, N. H. Russell, C. C. Marble, H. Browning, C. L. Norton, Jr., E. B. Sandberg, G. C. Caine, R. W. Conly, C. M. Boardman, and A. B. Bailey.

The recommendation for the award of the straight "T" (discretionary) to C. D. Dippel was passed. Sanborn won his straight "T" by his excellent work throughout the season in the dual meets and his victory in the mile at the New Englands. Elmer is very well liked out in the track house. He kept clipping his time all spring and ough. to be quite valuable during the cross country campaign next fall Sanborn was captain of the harriers in the 1921 season. Hendrie's "T" was earned by his consistent work in the two mile through the spring. He took second at Worcester in the New England title meet and firsts in both the Navy and Harvard meets, breaking a field record at Annapolis. Bob is the cross country captain. Tonon took second with the hammer in the New England championships and scored in all the dual meets. Tillie can top one hundred forty feet with the weapon and also competes in the other weight events. The elections of Hungerfold to the crew managership and Greatwood as captain were announced at the annual banquet. The sophomore assistants in crew are A. H. Stanton and H. C. Hoffman.

The awards of crossed oars go to: L. T. Blood, J. C. Molinar, W. B. Driscoll, R. C. Eaton, H. R. Greatwood, H. W. McCurdy, J. L. Brill, R. H. Kean, D. C. Sayre.

The new "bTc" Technology Boat Club, will be given to: R. J. Evans, C. B. Weiler, D. W. Murdock, H. B. duPont, J. H. Scholtz, Jr., A. M. Valentine, E. P. Dunleavy, H. D. Folinsbee, Jr., J. C. Nowell, Jr.

The freshmen crew numeral awards go to: B. McKennan, W. R. Blair, T. H. Butler, D. R. Campbell, R. L. Harriman, R. P. Price, R. D. Leonard, A. M. Prentiss, B. A. G. Thorndike.

The Executive Committee recommends to the Massachusetts Institute of Technology Athletic Association that M. C. Swift and C. P. Everett be appointed sophomore tennis assistants. A letter of thanks will be sent to Mr. Alexander Baltzly for his kind efforts in coaching the freshman team during the 1922 season.

A "tTt" will be awarded to the following: W. R. Scott, R. D. Carver, L. L. Tremaine, L. H. Hobbs, P. H. Scott.

The recommendation for the award of the "gTt" to the following was passed: H. M. Schley, J. Y. Ballard, A. L. Johnson, F. G. Clement, R. W. Conant, B. P. Harris, Jr., and Manager Zane.

TACKLING TECH

IN the autumn there will appear, it is hoped, a new book on how to get through Technology most efficiently. It will be called "Tackling Tech," in all probability, according to the announcement of its author, Lawrence D. Conant, '21, for the past year an instructor in Course XV under Professor Schell. The book is designed to give a boy in Tech or in any engineering school of similar rank, or any boy preparing to go to Tech, an idea of the best way to order his life as an undergraduate; studies, examinations, leisure, activities, health and finances. It is not a book of theory; the author can vouch for the practical value of most of his rules from his own experience. It is not an "uplift" book so much as a blue-print for a successful undergraduate life. Every alumnus with a son at college, especially Tech, or with a son preparing for Tech, or who hopes some day to have a son who may want to go to Tech, will be interested in this compact and practical little volume.

INSTITUTE HAS WON HIGH PLACE AMONG COLLEGIATE CREWS

Despite many defeats rowing is established on higher plane
this year

ALTHOUGH the Institute crews had a good deal of trouble winning their races this year, the season has been easily the largest and most encouraging the sport has had at Technology. The oarsmen against which the engineers raced were among the best in the country, and in spite of trailing all the collegiate combinations met the Cardinal and Gray crews have won a higher place in the game than they have held before this year. Arrangements are to be closed with all the colleges this spring for races next year.

In practically all their contests the Technology eights held their own during the first mile. After this mark had been passed the rival athletes showed the greater endurance and stamina, usually pulling out to open water wins. It has been suggested that the stricter training which is practical at other schools and can hardly be put in force here is responsible for this condition. The Severn and the Harlem are available for practice quite a while before the Charles is ready for navigation and the longer practice period enjoyed by Navy and Columbia athletes, no doubt, is another factor.

The Institute boat was light, being outweighed by ten or fifteen pounds in all its contests. It is said that heavier crews have a slight advantage over the longer course, one mile and seven-eighths, and also are better able to row into the wind. With a little more weight in the boat next spring and a somewhat earlier start, as well as the benefit of this year's experience in the top rank, the chances are that Technology will make an improved showing.

In the Navy race, little hope was entertained for a victory since the calibre of the Academy oarsmen was known to be far above that of the Institute. The Middies had a veteran boat of champions and so far had had little trouble cleaning up all opposition. The Technology varsity lost by seven lengths over the Henley course, and both the second and third Navy crews beat the second varsity. Later Coach Dick Glendon's eight led Princeton by a wide margin, and Harvard by a slightly wider one, over the mile and seven eighths distance on the Charles.

While the varsity was defeating the Union Boat Club by two lengths on the Charles, the second and third crews were left behind by Yale down at New Haven. The Union men were not in particularly good physical shape and fell behind after the first half mile.

The races with Harvard were expected to be close but the Uni-

versity's sprint at the finish left open water between their boats and those of the engineers in both the varsity and second races. The first crew held its own until the Harvard Bridge was reached. At the Henley distance the Crimson had a three-foot advantage. From then on Dr. Howe's men went to the front, leading by six seconds at the finish. The second Technology eight did not make quite as good a showing, being beaten by a wider margin and following for most of the journey.

The season closed with two races on the Harlem with Columbia Saturday afternoon, May 20. Columbia won both, though the varsity contest was quite exciting and kept a crowd of Technology alumni on the banks on their toes. The Blue and White won by four lengths.

The Executive Committee having appropriated \$3,500 for the purpose, the newly purchased boat house is undergoing alteration and repair. The piazza is being closed in so that it will become part of the lounge room; the locker room when fixed up will contain new steel lockers similar to those in the gym and the track house. The plumbing will be completely replaced by modern installation, with hot and cold showers. A heating plant which will heat the building, as well as the water for the showers, is to be installed. The architectural changes, under the supervision of Prof. H. W. Gardner, are being carried forward as rapidly as possible. Those in charge hope to have the alterations completed before the season is well advanced.

NEW TERM MEMBERS OF THE CORPORATION

THE three members of the Alumni Association elected this spring for a term on the Corporation of the Institute are: F. W. Lovejoy, '94, of Rochester, New York; W. C. Potter, '97, of New York City; and L. D. Gardner, '98, of New York City.

T. E. N. COMPLETES SUCCESSFUL YEAR

FROM its initial appearance in October, with the accompaniment of white sweaters and arm bands, to its final blaze of colors, the *Tech Engineering News* has undergone a very prosperous year. During this time it has increased eight pages in size and its circulation has more than doubled. This phenomenal advance has been due to a number of causes, some of which are mentioned in what follows.

Perhaps the greatest advance has been along the line of organization. An office manual has been drawn up which contains the history, traditions, policies, and organization of the *Tech Engineering News* as well as the duties of each individual on the paper. It has been handsomely decorated by one of the members of the staff, and is a product of which the whole staff may be justly proud. This manual is to be used as a reference book by all men on the paper, and its instructions are executed under the direct supervision of the assistant general manager.

During the year, the *News* has instigated various novel publicity features. Nearly every undergraduate will remember the Automatic Selling Machine and the Thumb Tack Theatre. These are a few of the devices which were used to provide an interesting divergence from the ordinary routine of selling issues. Also the Bean Guessing Contest aroused considerable interest among the students and helped stimulate interest where a more conservative selling campaign would have failed.

The *Tech Engineering News* has played a prominent part in the Engineering College Magazines Associated which is composed of sixteen of the leading engineering college publications in the country. This organization promotes coöperation between the business and editorial departments of these papers. Its chairman is Prof. H. E. Pride of the University of Iowa, and its eastern vice-chairman is Mr. H. E. Lobdell of the Institute. The association also employs Roy Barnhill, Inc., as its special representative in New York. This year the association has elected Mr. C. F. Lyman of the University of Michigan as editorial counsellor. Under his direction the group aims to obtain articles by prominent men on subjects of vital interest to the undergraduates in all engineering colleges. The article on "Getting a Job When You Graduate" in the June issue of the *News* was the first of these articles. The board promises more of these articles next fall.

Throughout the year, the magazine has followed a policy of publishing articles of scientific, industrial, and general technical interest. It has also published articles of direct interest to Technology men. Among the latter were "Tech Traditions," "American Students' Reconstruction Unit in France," "The New Fisheries Course," "Course X-A" and two articles of direct interest to the graduating class on "Opportunities for the Class of 1922."

Interesting articles of purely scientific interest appeared on "The Value of Theories," "A Photographic Research Laboratory," "Stars and Atoms," and "Early Earth History." Articles of a more practical nature were written on "Aëronautical Engineering," "Power from Volcanic Steam," "Modern Gold Dredging," and "Colorado River Project." The editors, however, have not forgotten the value of general articles and so have included articles on "Business Conditions," "Stained and Painted Glass," "Civil Engineering and Civilization," "Living Conditions at Sea," and a "Canoe Trip Through the Caribbean." Students interested in foreign countries have been able to obtain first-hand information on Argentina, Uruguay, Brazil and Canada.

The leading article in the June issue, "Photo-elasticity," perhaps deserves special comment here. It not only gave to Technology men and the outside world an idea of what was happening in our research laboratories, but also indicated a new process by which engineers can obtain necessary information on stresses in a much more accurate and simpler manner than before. The accompanying color plates, which illustrated the article, were a distinct triumph in the technique of magazine illustration since color printing has never appeared in a college engineering publication before, and its adoption in the June issue is therefore a long step forward in technical journalism.

U. E. B. TO OPEN SUMMER BUREAU

New director R. L. Holt, '24, urges alumni to help locate summer jobs—place 160 men this year

THE Undergraduate Employment Bureau has been, for several years, the medium through which many worthy students have found it possible to remain at Technology. This bureau finds positions for men in dire need of financial assistance to defray their living expenses, besides endeavoring to locate openings for men who wish to earn their spending money, or wish practical experience to supplement their work here at the Institute.

Under the directorship of E. E. Bigelow, '22, this bureau has had a very successful academic year in spite of the adverse business conditions. Spare time chore jobs have been fewer than ever before, but practically all the needy men have been placed.

Since January 1 a total of 160 men have been placed in positions; the pay for these jobs adds up to about \$7,500. Out of the total number applying for jobs, 62 per cent secured work. Out of the total number of jobs available, 92 per cent were filled.

Such a record would seem to indicate that the director of the bureau and his assistants are able to handle the employment situation alone; but this is said not to be the case, especially in regard to summer work.

In a recent issue of the *TECHNOLOGY REVIEW* an article by R. L. Holt, '24, next year's director, urged the alumni to help the bureau out and let them know of any summer jobs available.

It has been announced that the bureau will be open all summer till September 2, and possibly throughout September.

THE NEW GLIDER OF THE AERONAUTICAL ENGINEERING SOCIETY

"HOPPING off," say, from Parker Hill in a motorless airplane and soaring over the Back Bay, and finally landing on the Common after executing a figure eight in the air, is a feat that could possibly be accomplished if the soaring glider, now being built by the Aeronautical Engineering Society of the Massachusetts Institute of Technology, bears out the hopes of its designers. Two students, Edmund T. Allen, president of the society, and Otto C. Koppen, laid the plans for the glider, which weighs only seventy pounds and embodies in its construction those factors that have made soaring flight in Germany since the armistice so markedly successful. Flights of fifteen and more minutes' duration have been made in Europe, and what is especially remarkable is the fact that the glider soars by taking advantage of rising wind currents.

In many ways it is curious that aeronautical engineers are reverting to the ancient means of flying in order to develop new designs. Much has been learned since Leonardo da Vinci in the sixteenth century gave to the world his treatise on flight. The gliders of Lilienthal and Pilcher in the latter half of the nineteenth century, compared to the Technology plane, are mere toys, yet it was by means of those crude frameworks that the great passenger planes and speedy fighting ships of today have been developed. Since the airplane became reasonably perfected little attention has been paid to gliding experiment by the public and the present interest is largely due to the meets that have been held in Germany. That Germany should have gone back to the glider may at first seem surprising until it is remembered that the armistice terms greatly restricted her aeronautical manufacturers.

On February 1 of this year the engineering society at Technology held an open contest for the best glider designs. There were five competitors and the judges were Prof. Edward P. Warner, W. H. Miller and G. M. Denkinger. The machine that won is of the monoplane type with cantilever wing construction. Practically all metal fittings have been replaced by plywood web construction and this has been done without sacrificing strength. Skids and a tail skid have been substituted for the customary landing gear and wheels. The wing is twenty-four feet long, while the wing area is one hundred ten square feet. A Martin No. 2 wing curve has been adopted, thereby giving the glider great lifting power. The fuselage is ten feet long and the woodwork is chiefly spruce. The wing and tail will be covered with a balloon fabric which weighs only one and nine-tenths ounces a square yard and is about one-third as heavy as the average airplane fabric.

The entire plane has been built at Technology and will be ready for flight when it has been covered by this fabric. How to launch the glider is one of the greatest problems facing Mr. Allen, who will be the pilot.

Several methods have been used in Europe, the more common ones being by running along the ground or merely jumping off a steep incline. According to present plans the glider will be sent into the air by means of a shock absorber rubber fastened to the underneath part of the plane. The glider, with Mr. Allen in the pilot's seat, will rest upon the summit of a hill. Three men will walk down the hill, pulling on the rubber cord, while a third man will hold the glider's tail. At a signal the tail will be released and the machine will shoot forward into the air, the rubber cord dropping off. Although some of the foreign gliders have been built without the usual number of control surfaces, the Technology plane has three controls, namely, the elevator, rudder and ailerons.

The glider has been built to test wind currents and ascertain just why it is that it is often possible to gain altitude. Mr. Allen points out that it is not merely a case of starting from a certain elevation and gliding to the ground. Wonderful flights have been accomplished in Germany, the pilots changing their courses at will, circling through the air and having absolute control over the machine.

Mr. Allen was in the air service during the war, having trained cadets in acrobatics in Texas. He came to Technology from the University of Illinois.

PROFESSOR WARREN FOR DEAN OF SHEFFIELD SCIENTIFIC SCHOOL

THE Yale Corporation has elected as successor to Director H. Chittenden, Prof. Charles Hyde Warren, a graduate of the Sheffield Scientific School in the Class of 1896, and since 1900, a member of the Faculty of the Massachusetts Institute of Technology, where he has been professor of mineralogy since 1915.

The dean-elect of the Sheffield School was in the Class of 1896, in that school from 1896 to 1900, studying in the Graduate School during this period and receiving the degree of doctor of philosophy in 1899. In addition to his teaching at the Massachusetts Institute of Technology he has been extensively occupied with expert work for various mining and manufacturing chemical concerns. He has also carried out a large quantity of research work of a purely scientific character.

Professor Warren is a member of the American Academy of Arts and Sciences and the Geological Society of America. He is also a member of the Yale chapter of the honorary society of Sigma Xi. His published works include, "A Manual of Determinative Mineralogy" (1910), and contributions to American and German technical journals. — *Journal, Meriden, Conn.*

M. I. T. GLIDER TO GO TO FRANCE

Contributions requested— an unusual opportunity

ON Monday, June 12, 1922, the first successful motorless flights made in the United States since the Wright experiments in 1909 were made by a Technology glider. The five flights were made from the hills of Choate Island, off Castle Neck, a promontory near Ipswich, Mass. So satisfactory were these tests that Prof. Edward P. Warner has very strongly approved the entering of the Technology glider in the international contest.

The "Premier Congres Experimental d'Aviation sans Moteur," to be held in the city of Clermont-Ferrand (Auvergne) France, from the sixth to the twenty-second of August, 1922, is the first international soaring competition. The French Government expects that this competition will be of greatest importance, not only to scientific flying, but to the realization of economic aviation as well. So far as may be known now, there is to be no other American entry. The Technology glider may therefore represent the nation as well as the Massachusetts Institute of Technology at this important meeting.

The purpose of this letter is to ask for coöperation on the part of the Technology Clubs and the alumni. The Aeronautical Society is alone unable to carry this experiment into an international field. Contributions of time, labor and money by a few members of the Society have been the sole resources of the project; for the Clermont-Ferrand contest, however, the financial potentialities of the students are insufficient. The two thousand dollars needed will be used for the expenses of packing and transporting the machine, for the fees, and for the pilot. The pilot who is to take the machine to France, Mr. Edmund T. Allen, is a student member of the Society. The glider in which he made the successful experimental flights was built under his supervision. Four other Technology men are to go to France privately to assist the pilot, and three of them are now working on the machine to be used.

Additional information may be had by addressing Mr. Van J. Weaver of Rockport, Mass., Prof. Edward F. Miller or Prof. Walter Humphreys, Secretary of the Alumni Association. Mr. Harry J. Carlson, President of the Alumni Association, will receive and administer the fund. He may be addressed at 89 State Street, Boston, Mass.

THE AERONAUTICAL ENGINEERING SOCIETY
OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

HARRY C. KARCHER, for the President.

COAST ARTILLERY GOES TO FORT MONROE

MEN taking Coast Artillery work in the Reserve Officers' Training Corps this summer will spend their six weeks at Fort Monroe, Virginia, at Old Point Comfort. The camp begins on June 15, and ends July 27. Colonel A. A. Maybach, who was Professor of Military Science and Tactics at the Institute in 1919, will be the Camp Commander. He has taken full advantage of the excellent surrounding country in preparing a very desirable program of pleasure and instruction. The camp is situated within a short distance of the best summer resorts in Virginia, and the men have frequent opportunities to visit them.

The course of instruction given at the camp is entirely of a practical nature and is arranged so as to give applications of the theory taught during the school year; rifle and pistol practice with some automatic rifle and machine gun firing will be the major subject for one week. Students will fire regulation army courses and will be eligible for regular army marksmanship badges. In addition to the required firing, college teams will be organized for competitive work. The winning college team will be sent to Camp Perry, Ohio, to compete in the National Rifle matches. At last year's camp the University of Michigan team won at Fort Monroe, and at the National matches they repeated their victory over the teams from the other R. O. T. C. camps representing infantry, cavalry, and engineer units.

One week will be devoted to tractor artillery work. Every student will be instructed in driving trucks and tractors, and in the maneuvering of 155 mm. G. P. Filloux guns. Motor convey experience is given to all the advanced students in the form of a forty-mile drive to Camp Eustis, with about thirty-five trucks taking part in the movement. Anti-aircraft, artillery, and searchlight operation are new features of the camp which will be offered to the students. The regular anti-aircraft battalion at Fort Monroe conducts its target practice by firing at targets towed through the air by airplanes from Langley Field.

Every Saturday morning, instruction visits are made to points of interest in the neighboring country. The Portsmouth Navy Yard, the Naval Operating Base, Newport News Shipbuilding Corporation, Langley Field Air Service Schools and Laboratories, and the Yorktown battlefields are all on the schedule of visits. On Saturday afternoons, many students make boat trips or interurban railway trips to points of historical interest such as the Jamestown Colony which was settled in 1607, and to the numerous battlefields of the Revolution and Civil War around Richmond, Virginia.

Drill is held regularly at the camp. Last year the battery of Technology students, H. L. Pearson, '22, Cadet Captain, won the silver cup for excellence in infantry drill.

About five hundred fifty students from eighteen colleges in the eastern half of the United States will attend the camp this summer so that it is possible to arrange for many social and competitive recreations during the course.

COURSE IV MEN IN THE THEATRICAL WORLD

Both are applying Tech Show training to the professional stage

CLARK ROBINSON, '17, has been engaged by S. L. Rothafel of the Capitol Theater of New York City, the largest motion picture theater in the United States, to design stage settings. Mr. Robinson since his graduation from Course IV has had much experience along similar lines. He began as architectural director for "Way Down East," and then had charge of the designing of sets for Famous Players productions. Later he served as art director in "The Ruling Passion" and other productions of George Arliss. He has also been the designer of the stage settings for the Music Box Review.

Mr. Robinson is considered one of the most promising of the younger scenic artists of the stage. His theory of stage settings and the execution of his designs have few equals. As a senior at the Institute, he contributed to the settings for the Tech Show of his year.

J. Paul Gardner, '17, has opened a dancing studio in Washington, D. C. He is more widely known as Paul Tschernikoff, the ballet master formerly with Fokine and Adolf Bohm. He was the director of the ballet and the premier danseur of the Washington Opera Company which gave the recent performances of "Samson and Delilah" in Washington and Baltimore. He is a graduate of Course IV, and was chairman of the costume committee in the 1917 Tech Show. During the war Mr. Gardner was a captain in the Coast Artillery Corps and received the Croix de Guerre, with a palm. In his studio he teaches the Washington débutantes the steps of the Russian dances.

MANY MEN COMPLETE R. O. T. C. WORK

Seniors receive reserve commissions at graduation

THE fourth-year students who completed the Reserve Officers' Training Corps training this year are classified by the Department of Military Science, as follows:

I. List of men who received commissions upon graduation on June 12 and were sworn in at graduation exercises.

II. List of men who have completed the Reserve Officers' Training Corps course but cannot be commissioned at this time on account of being under age. These men will receive certificates of eligibility which can be exchanged for a commission when the holder becomes of age.

III. List of men who have completed the course at the Institute but have to attend a training camp this summer. These men will receive commissions upon the completion of the training camp.

I

The following men received commissions upon graduation on June 12 and were sworn in at graduation exercises:

COAST ARTILLERY

Appel, Parke Dinwiddie
Brokaw, Charles Edmund
Browning, Albert Jesse
Coddington, Laurence Warren
Cook, Joseph Francis
Dimmick, Henry Stuart
Dyer, Colver Payson
Erikson, Alden Farnum
Friedrich, Valentine
Gegan, John Broderick
Gill, Thomas Henry
Grover, Clayton Demon
Lundborg, Carl Jacob
MacMahon, William Kennedy

Mann, Raymond Fairbanks
Miskelly, Raymond Eugene
Macdonald, Ronald Gordon
Morgan, Francis Ring
Morse, Clifton Benjamin
Pearson, Harry Leslie
Phillips, Paul Maurice
Rockefeller, Harry Eugene
Sallaway, John Edward
Shearer, Ward Edward
Sloan, Howard Backus
Stanley, Harold Preston
Tewksbury, Russell Benton
Van Gieson, Ross Elliott

SIGNAL CORPS

Alden, Philip Merriam

Caplain, Philip
Thomas, Earl Roger

AIR SERVICE

Knight, Montgomery

ENGINEERS

Almquist, Frederick Albert	Laverty, Francis John
Apollonio, Norman Lothrop	Laird, Leonard Bentley
Bell, Andrew McAlpine	Lawson, Alfred
Bigelow, Edward Eugene	Littlefield, Robert Moses
Brittain, James Frederick	Merrill, Edward Atkinson
Brouwer, Roger DeRiemer	Moore, Chester Arthur
Brown, Daniel Arthur, Jr.	Perkins, Clarence William
Carleton, Ralph Dudley	Poole, John Ward, 3d
Chase, Hugh Donald	Randlett, Norman Prescott
Cohen, Sigmund	Riley, Philip Lawrence
Craig, Thomas Singer	Robbins, Keith Wilkinson
Cychol, John Joseph	Shaw, Edward Clifton
Eckberg, Adrian Emmanuel	Silverman, Abraham George
Essick, Bryant	Sweeney, Frederick Foster
Gallagher, Ernest Francis	Taylor, Emil Elvidge
Gasser, Bernhard	Wamsley, Donald Carpenter
Hewes, Walter Raymond	Ward, Joseph Sylvester, Jr.
Jones, W. Barton	Wray, Theodore Strong

ORDNANCE

Ash, Edward Allen	Loss, Isidor
Ball, Isidor	Mackenzie, Lachlan
Connor, Harold Augustine	Manville, Charles Wesley
Cooper, Benjamin Austin	Marmon, Franklin Hall
Crofton, Charles King	Macomber, James Keith
Greening, Chester Wyatt	Miner, Harry George
Hammond, Elmer Weston	Randall, Joseph Hungerford
Hastings, Philip McAlpine	Reed, Daniel Joseph
Hemeon, James Russell	Rubin, Bernard William
Hogan, Randall James	Shepherd, Thomas Elwell
Jewett, Earold Carter	Sheppard, Malcolm Keene
Johnston, Alan Charles	Stone, Royal Amidon
Kirley, Walter Thomas	Williams, Othneil Glanville
LaPenta, Andrew Salvador	Spalding, Francis Wheeler

II

List of men who have completed the Reserve Officers' Training Corps course but cannot be commissioned at this time on account of being under age. These men will receive certificates of eligibility which can be exchanged for a commission when the holder becomes of age:

COAST ARTILLERY

Nash, Paul Revere	Rickers, Frank Otto
	Nesmith, James, 2d

ENGINEERS

Bainbridge, William Warin, Jr. O'Connor, Edward Joseph
Barrett, William Francis Westcott, Frank Tourtellot, Jr.
Wilbur, Barland Ashley

ORDNANCE

Bryden, Colby William Guerin, Frederick John
Copellman, Saul Jolius Taylor, Charles Martin, Jr.

AIR SERVICE

Maling, Cressy Croswell Morse, Edward Allen Somes

III

List of men who have completed the course at the Institute but have to attend a training camp this summer. These men will receive commissions upon the completion of the training camp:

COAST ARTILLERY

Leland, Sanford Daniels, Jr. Merriam, Kenneth Gerald

ORDNANCE

Cavarly, Haywood Perry Ramsey, Webster Kimball
Gibb, George Wakefield Speir, Godfrey Burras

SIGNAL CORPS

Horgan, Francis Joseph

ENGINEERS

Bauer, Morris Miller

"DANCERS IN THE DARK"

A best seller with a scene or two laid at dear old M. I. T.

SOMEBODY told us that there was some Tech scandal in the new "flapper" novel, "Dancers in the Dark" by one Dorothy Speare, which George H. Doran Company published this spring. Naturally we were interested, for, from what we could gather, the author had tried to do the Scott Fitzgerald "This Side of Paradise" thing from the point of view of the girl, and the book had rapidly become something of a sensation in the younger set. So we looked eagerly for material on which to base either a burning denunciation of the morals of our undergraduates or a more burning denunciation of the author for libelously smirching the fair name of the Institute.

Unfortunately there isn't much either way. There are two Tech fraternity men with the unlikely names of "Crawf" and "Dum-Dum" who take a girl to a road house and lose her to the great alarm of the girl's friends, and there is an impressionistic bit about a fraternity dance, vaguely located at "Tech" and described as follows:

"Never before had she seen such a spectacle. Three wide rooms were given up to dancing — the orchestra playing in the hall — sole illumination the dim one that filtered from the hall into two of the rooms, and as for the third, it remained in blackness relieved only by ghostly dresses clasped to white shirtfronts. The three stared from the doorway for a moment of silent fascination. It was like some hazy voluptuous dream — feverish music quickening the throbbing of desire — the little sigh of figures interlocked, moving in time to the throb, in the dripping black velvet of the dark. It was something one might have imagined in the days of Nebuchadnezzar."

That's all there is about Technology. There isn't any more. And it's hardly enough to make one feel that the author knows Technology intimately. Mebbe they do have those carryings-on at our fraternities. Or mebbe the girl got into a Tufts frat by mistake, or Simmons. A girl who could describe so lurid and exciting a life as her heroine's experience, and write such consistently bad English at that, might conceivably get her fraternities mixed. It's a lively and interesting book, we can bear witness to that, but it does not make us worry about the future of the race quite so much perhaps as the author would like.

So much for the plaintiff! Now the witness for the defence. In the *Philadelphia Public Ledger* of last April a Swarthmore girl, in the course of a warm letter defending our college generation, pays this tribute to our own boys, evidence which we think outweighs considerably the vague aspersals in 'Dancers in the Dark.'

"As for 'College Proms,' I need not call attention to the amount of ink wasted in proclaiming the decadent state of the American Youth

as evinced by 'College Proms.' Last week the writer was a guest at Junior Week (of which the biggest event is the Prom) at the (Massachusetts Institute of Technology) in Boston. At the functions of that week, which was attended by girls from all parts of the country, a few things were conspicuous by their absence. As, for instance, girls smoking cigarettes, men or girls intoxicated, improper dancing, 'petting' and the types of girls suggested by such appellations as 'flapper' 'house-party queen' and chorus-girl. Every one who knows anything at all about college men and 'College Proms' knows that for the real big prom 'the best girl' is always imported, no matter at what expense, distance or inconvenience; and at this affair the girls (a large per cent were college girls) were a truly admirable sort, as were also the matrons who graced the occasion in the receiving line."

R. E. R.

PUNCHING THE TIME CLOCK: A MOLLYLOGUE

L. MAGRUDER PASSANO

MOLLY came in singing, but when she saw my face she stopped. "Why, Dad, what is the matter?" she cried. "Positively, Father, your face would stop a clock."

"My dear," I replied, "your words are prophetic — after the event. My face has stopped a clock, a time clock. At least my hand did, which is the same thing, and in three places or times, all three wrong."

"My word, Father! I suppose you know what you mean — you always say you do."

"Molly, it's like this. As they say on the signs in the window of a boarding house, our factory — dear me, I've formed the habit already! — I mean, of course, our university is under new management; and the new management has installed a time clock in the Superintendent's office —"

"Why, Father, I thought all clocks were time clocks. What else is a clock for? — except, of course, alarm clocks and they are —"

"Yes, my dear, I know, but I wouldn't say it. It isn't ladylike. A time clock is a clock that you 'punch' when you go to work and punch again when you stop working; a sort of a mechanical gum shoe man, for idle apprentices."

"I shouldn't like that," said Molly. "It tells when you start work and when you stop — but, Dad, it can't tell whether you're working when you are at work, can it? I guess it isn't so bad after all."

"As I was saying, my dear, they have installed a time clock in the Superintendent's office, and each professor has to punch it when he arrives for work. I got in at eight forty-five this morning and went to punch the clock. The Superintendent's office wasn't open — it never is before nine fifteen — but I found a janitor to let me in and started to punch. Just then I happened to think of the correct interpretation of a certain Hittite inscription and punched the clock for eleven fifteen instead of eight forty-five. I saw at once what I had done and tried to correct it. But I made mistakes again and landed Wilbert in his laboratory at six thirty, and Homans in his lecture room at ten thirty, a half hour late. Then I gave it up."

"Well," said Molly, "I don't see that there was much harm done. You were there just the same."

"No harm done, my dear! Why at three o'clock I received a note from the Third Assistant Bursar saying that I was docked two hours' pay, and that the amount — one dollar and thirteen cents — would be deducted from my next quarterly salary check. Now I can't afford to lose one dollar and thirteen cents, especially as I was there doing my work all the time."

"A dollar thirteen isn't much, Dad. I'll lend it to you out of this week's allowance and you can pay me back in my next week's allowance; with interest, if it will make you feel better."

"Thank you, my dear. But that isn't all. At three thirty o'clock I received a note from the Second Administrative Secretary asking me to fill out some printed blanks he sent me."

"But, Dad," interrupted Molly, "who are all these people? The Superintendent of Janitors, the Fifth Assistant Bursar, the Administration's Social Secretary, and all that? We haven't any such people at Smithley. I wish somebody would ask Professor Eva McWhirter to punch a time clock. There wouldn't be much clock left. I know there aren't any 'works' left inside of me after she's been punching me with 'Trig.' for an hour."

"I believe you are right, my dear. If we had a few suffragettes on our faculty they might succeed in making men of us. But all these people you ask about, the Head Bursar, the First Assistant Janitor and so forth, they're the people who see to it that a thing is *not* done when and how the professors want it. They are the most important men in the university. They are the real business men who *do* things — the way the Corporation wants them done. They handle the 'dough,' pay the petty bills — including the salaries — buy the supplies — with a rake off, perhaps — look big, business like and important. In short they polish up the handle (of the President's and Corporation's office) so carefully that now they are the rulers of the university. The idea is, you see, to make the professor's life as hard and disagreeable as possible. Otherwise he might take to thinking for himself and saying and doing things that are not good for — big business. So they make him punch clocks and — that reminds me. I started to tell you about the blanks the Second Administrative Secretary —"

"Oh, don't bother, Dad. I'm sure you've had worry enough over it already," said Molly sweetly.

"I want to tell you, my dear. Perhaps if you hear that your father goes through each day, when he asks you to play a Beethoven sonata to rest him you won't sit down and play jazz from the Pink-Socked Lady instead. He asked me to fill out a blank stating in hours, minutes and seconds how much time I gave to research and whether and how much the research was paid for, in dollars and cents. Did I work on holidays and Sundays, and, especially, did I work — or sleep — during the sermon."

"I can answer that," remarked Molly.

"How many students I had in each class; how much did they weigh; their average weight — not including the 'co-eds'; were they blonde or brunette. How many times a week I met them; how many student-pound-hours, minutes and seconds I worked per week, per month, per year, per — spiration stood in beads upon my brow. I turned the blanks over expecting to find on the other side the question: "Do you lecture to the students through a megaphone or through — your hat?"

"Why did he want to know that, Father?" asked Molly.

I looked at her and seeing that she was in earnest, replied, "Because, my dear, if you are talking through a megaphone you are talking conservatively along the lines of good educational administration, but if through your hat, you're a socialo-anarcho-bolshevist, even if you're talking about the prices of vegetables on Babylonian tablets."

"I hope, Father, you got the blanks all filled out, and without too much blank-blanking on your part."

I looked at Molly dubiously. Has she ever heard me swear? I fear she has. But I continued. "You see Molly, a professor likes to spend some of his time in teaching. He likes to forget that he is being paid and to remember only that he has before him a group of young men who want to learn and whom he can inspire with some of his own enthusiasm. But, as the Bible says, the sins of the administration are visited upon the professors unto the third and fourth — degree; chiefly the 'third degree.' However, what can you expect? You know that *Gallia est omnis divisa in partes tres* —"

"Yes, I know that much at least," said Molly.

"Very well, then. All Gaul is divided into three tribes; the Sycophants, the Sluggards and the Cowards; with an occasional Vercingetorix. No wonder that Cæsar and the things that are Cæsar's find it so easy to conquer Gaul."

"I don't know what a sycophant is," said Molly. "You may be one, Dad. But I do know that a man who gets up at two o'clock in the morning, disturbing mother and the whole house, to write a poem called 'What's the Use?' or the 'Free Verse's Lament' and lets the alarm clock go off as usual at six thirty — well, he certainly isn't a sluggard or a coward."

"You are mistaken, my dear. I was scared to death when I did it. But I must write my verse even in deadly peril of you and your mother. And that reminds me, there are two more stanzas of the poem I recited to you the other day.

Merchant and lawyer, statesman, financier
Pat the professor's shoulder, say, "Old dear,
Work hard, be good and patient, make no fuss;
Some day perhaps you'll be as good as us."

Almighty — dollar! God of our great land,
Pity the poor professor, give him "sand"
To beard the Philistine lion in his den
And twist his tail until he growls "Amen."

"After all, Molly, the great theory of relativity explains the matter. The prof lives in a world of four dimensions: beauty, truth, wisdom and service, those others in a world of two dimensions: money and time, and, you know, time is money. If I were writing an essay, my dear, instead of just talking to you, I would add a foot-note saying: *It does not follow that the prof moves about in all four of his possible dimensions, but those others necessarily move in the only dimensions they have.*"

HOW TO PICK A PRESIDENT

Helpful Hints to the Corporation — by John Palmer Gavit in the
New York Evening Post

IN the course of my pilgrimage among a few of the Eastern universities I ran across the trail of a committee of the trustees of an important American college looking for a president for their institution. The chairman of the committee had in his pocket a list of some forty men regarded as potentially available — a list of men either already in office as presidents of educational institutions or in line for such presidencies. At the same time I heard that other committees on similar errand bent were abroad in the land, each likewise looking for a college president; the chairman of each no doubt had a similar list in his pocket. And I will wager a cookie that all of the lists contained virtually the same names!

Most of the difficulties and deficiencies of American colleges arise from the general prevalence of two ideas with regard to the nature and function of the college and the character and qualifications needed in a college president. The first is a very old idea, gradually passing out of vogue, to the effect that education is a mysterious business, beyond the ken of the ordinary person, that the facts and philosophy of it constitute a sacred and esoteric "dope" which no unhallowed layman can hope or ought to presume to understand. The holy medicine men of education have encouraged this idea, and a large proportion of the teaching profession actually believe it even yet.

The second idea, which grows out and is no doubt a corollary of the first, is that being a college president is a kind of skilled trade, requiring certain standard qualifications. The inference from this idea is that college presidents are interchangeable at will like gears or mudguards of a Ford.

So the committee of the trustees goes about, looking over college presidents with the notion that all you have to do is to find one who has made a success where he is, pry him loose with a "call to a larger opportunity for service" — usually the polite formula with which to camouflage a larger salary offer, and — there you are; the problem is solved.

It did not seem to have occurred to the committee to which I have particular reference that college presidenting is by no means a standardized occupation; that the fact that a man has made a great success in one place is no reason for supposing that he will make a success in another. It used to be sufficient in a general way that a president of Princeton should be a Presbyterian; of Harvard a Unitarian; of Yale a Congregationalist; of Brown a Baptist; of Wesleyan a Methodist — in each case a minister. Aside from the denominational

prerequisite, and the fact that a minister was presumably better fitted than any layman to superintend an education chiefly designed to prepare for the ministry, the notion prevailed and was largely true, that a college was a college.

Perhaps a college was a college then; it isn't so any more. No two colleges are alike nowadays, and the problem which a newly chosen president has to tackle differs in each case. Imagine taking hit-or-miss from a list of standardized "college presidents" for the presidency respectively of Yale University, Girard College, Antioch College, University of Virginia, Massachusetts Institute of Technology, Williams College or the University of California.

Without reference to this particular list, one institution has a problem of reorganizing its educational policy and curriculum; another has a horrible financial mess to straighten out; another is in the aftermath of an internecine struggle between president and trustees or president and faculty; another has a mutinous and turbulent student body to pacify and bring under discipline; another has an obsolescent faculty to sift and reorganize; another has a social problem to solve; still another an old tradition to maintain, modify or vitalize, or a new program to put into practical operation. I can hardly imagine Hopkins of Dartmouth making good with continued peace in the family at Wesleyan or Colgate; Hibben of Princeton as president of Girard; Lowell of Harvard as president of Vanderbilt, or Meiklejohn of Amherst as president of Massachusetts "Tech" or Rensselaer Polytechnic.

The personality of the president of a college is an enormously important factor in its efficiency and welfare. The man has to fit not only the job, but the spiritual atmosphere and environment of it. Given that fitness, it is relatively unimportant what the form of the organization may be. One kind of man will dominate the situation and rule it with what looks like tyranny; another will unify, inspire, and lead; still another will merely utilize the forces available and let somebody else look like the dominating factor. Given the wrong man — a beautifully round peg in an admirably square hole — and you will have discord, clatter of perfectly good machinery, and an unsatisfactory result generally. Not only that; but the exactly right man for the presidency of any given college at one time may be the exactly wrong man for precisely the same job at another time. And a man who is ninety per cent fit at any old time may be unfit by a ten per cent margin of unfitness so bad that the ninety per cent might just as well be zero. It is by no accident or coincidence that Lowell of Harvard, Hibben of Princeton, Angell of Yale, and Hopkins of Dartmouth seem so perfectly fitted for and typical in the positions they hold; they either have made those jobs, which fit them like old shoes; or they are so obviously suited to them that they might as well have been born in them.

Given the right man in the presidency of the college, the first thing he has to adjust is his board of trustees. It takes a long time for even a very powerful president to convince a trustee of his destination,

beyond which "his ticket does not read." The most successful college president is he who has been most deft and diplomatic in locating the boundaries of trustee control. The trustees are ordinarily the custodians of the property — often very large — and of the general purpose and policy of the institution. The trouble comes — and this is illustrated in the case of most of the rows in which college presidents find themselves — when the trustees spill out of their domain and undertake to dominate details.

One of the most vicious by-products of the war is a faith in the efficacy of propaganda on all subjects. Trustees more than anybody else have tried to inject this into the colleges, and to bend the teaching function and the apparatus of truth seeking to the purposes of specific propaganda. This is waning, to be sure; but there are still good men on boards of trustees and overseers who are seeking to fill faculties with men whose special business shall be to preach certain doctrines and theories about national and world politics, about property, and economic relationships. A few brave college presidents have fought this tendency from the outset as injurious to the cause of education; others are finding voice against it; presently now the movement will subside and the trustees will get back their business.

All the college presidents with whom I have talked believe that a trustee should be invariably a graduate of the college; that this is not the place for the injection of "outside" blood. I think they are mistaken; that every board of college trustees should contain not only one or more graduates of other colleges, but a representation of the outside, non-collegiate world. One trouble with these institutions, especially those heavily endowed and so more or less independent of public confidence and support, is that they get a disproportionate idea of their own importance and omniscience; have a super-sense of the impeccability of their own institution and a more or less dense ignorance of the progress of the world. Only about one per cent of the population gets to college at all; they would do well to consult in matters of policy and management with selected representatives of the human race. Moreover, college presidents and trustees might once in a while recall the fact that even the most impregnable endowed institution is heavily subsidized by the public through the mere fact — so often naively overlooked — of exemption from the taxation which falls so heavily upon the rest of us. They have scant title to regard their doings as none of our business. What if we should change our minds and tax them as we tax ourselves?

And then there is the faculty. It is customary to think of the faculty as a unified machine made up of uniform pieces. Not so; they are terribly human, with individual prejudices and ambitions. The most terrible thing about them is that they *wear out*. The most important part of the equipment of a college is its teachers, and the hardest thing a college president has to do — if he is a man with a heart in his body, and especially if he is a new president with the job of reorganizing and strengthening his faculty — is to recognize and act upon

the fact that a piece of this equipment has worn out in the service. Perhaps the greatest single obstacle to the efficiency of a faculty is the presence in it of so many men who *were* efficient — twenty years ago. What can be done about it? Shall you fix an age limit, a retirement maximum, a date when a man must get out because he is sixty, sixty-five, or even seventy years of age? William Graham Sumner at his lowest waning point was better than some men that I could name who are still in the forties! And who has the audacity to say to a teacher who for love of his work has served at starvation pay for forty years after living decently and educating his children, to save little or nothing for old age: "Step out, now, Old Faithful; here's your hat — you have become obsolete." Yet many of these men, loyal, well intending, still useful as teachers within a limited field, have not been able to adjust themselves mentally to changing conditions and human states of mind, and with a pure desire to serve the best, stand squarely across the road of progress and retard the steps of the college as otherwise it would climb out of its rut and join the procession. What shall a humane but progressive president do with such as these? The values in college life are largely imponderable.

And the alumni — God bless them, what a joke they are! They take themselves so seriously — like parents who think that the mere fact of parenthood has given them title to speak from Sinai. Where did the average alumnus learn anything about a college? On the football field? It is only a little while since sixty-five per cent of them got through their mid-year examinations by the skin of their teeth. They had a lot of fun in college; they know how this year's baseball team is doing. But what do they know about the college? If you wanted to know which college had the best course in law or astronomy, economics or business administration, would you try to find out from the alumni? What do they do at class reunions, of any old college — study and discuss the problems and welfare of the institution? Not so that you could observe it with the naked eye!

What is the influence of the alumni upon the student body? What do these big brothers talk about to the boys still in college? I will tell you in the words of an alumnus who owned up very frankly to me that what a college ought to expect from its alumni, so far as the fitness of most of them to give anything else was concerned, was "money and silence."

"What does an alumnus think about?" this man said. "Well, so far as he makes himself heard by the students, he thinks about: First, football. Second, baseball. Third, college pranks and scrapes. Not the time when he got 'A' in Greek or mathematics, but the time when he and old Bill Haskins took a cow up into Professor Dingbat's recitation room or stole from Squire Bates's meadow and hung on Prexy's door the sign, 'Dangerous Bull in Here.' Fourth, other athletics. Fifth, fraternities."

The typical alumnus thinks that because he has given one hundred and thirty dollars to the endowment fund he has become a majority stockholder in a business concern which, since it cannot pay him

dividends, must run the place to suit him. Especially must alter its admission requirements so as to let in and keep in the athletes whom he recommends and subsidizes in the hope of "maintaining the prestige of the college."

Now, when I hear college presidents and faculty members complaining about the attitude and ignorance of alumni, I always say: "But they are what you made them! You had them here under your instruction for four years! If, as you say, they don't know anything about the college or about education, or think of nothing but athletics — whose fault is it?"

The alumnus is only a college boy, a little older than he was when the college pinned upon him his magic degree and sent him out into the world. In four great colleges I have seen fifteen thousand alumni in the incubator.

The college president's job, then, is somehow to educate into a common understanding and a common purpose five separate and curiously diverse elements, each indispensable in the situation, and each filled with good intentions and infinite potentialities: himself, his trustees, his faculty, his alumni, and his students. It's a man's job.

SOME COMMENTS ON JOHN R. FREEMAN'S REMARKS AT THE WASHINGTON TECH BANQUET

The following notes were elicited by the speech printed in the April issue — concerning the choice of a president

1. *From a College President:*

"You have touched upon the most difficult of all educational problems, and one to which almost no attention has been given — that of stimulating imagination. How this is to be done we do not know, and make extremely little attempt to discover. Education in America is mostly directed to the object of acquiring information, and at the best methods of work that are likely to be useful in a man's career; but little attention is paid to stimulating imagination, probably because it is so difficult a problem to get hold of. One of the difficulties in studying the subject is that all *a priori* discussion of educational problems is unsatisfactory, and it is almost impossible to study the subject of imagination by observations or statistics, because the thing appears to be so largely innate as compared with the extent to which it is the result of stimulation.

In regard to the qualifications for the President of Technology, it seems to me, after having some experience of such a position, that by far the most important matter is the personality of the man, which should be a blend of imagination and adaptability, judgment of men and many other qualities; and these may be effective, or ineffective, for the purpose, although combined in all kinds of proportions. The personality seems to me far more important than any supposed qualifications, such as scientific eminence, reputation, executive experience, etc.; and I am a little afraid committees think too much of the qualifications and too little of the man."

2. *From another College President:*

"I am in such thorough sympathy with your ideals that almost every paragraph strikes a responsive chord. Vision is the essential motive force, and so few of our students, and perhaps still fewer teachers have this rare endowment. If our teachers do not have it, how is it possible for them to transmit it to the students?"

It is a very gracious tribute that you have paid to Dr. Andrews and to Professor Sedgwick — both men of fine fibre and both having dreams that were worth while.

Vision and inspirational power — which is not more than the transmission of vision to others — are our essential needs."

3. *From another College President:*

"Seldom have I seen anything so interesting, both in its portrayal of individual characters and its discussion of general principles. I am, of course, pleased by your tribute to President Andrews. Beyond all men I have ever known he had that power to inspire boys and young men. Just how or why he did it no one seems to be able to tell. The curious thing is that those who rejected all his political, social, financial and educational theories, yet acknowledged the spell of his personality."

4. *From the Chairman of a Board of Trustees:*

"Vision and horizon are words which have always been much in my mind and occasionally on my tongue. But of all the strands which you have twisted into your cable I think perhaps the strongest is number two — a judicious selection of boys for education. This is a great idea. The colleges are being swamped by the inrush of young oafs who are neither seeking an education nor capable of acquiring one — an enormous economic waste and objectionable for many other reasons."

5. *From a member of the Executive Committee of the Trustees of another College:*

"We are fully enlisted here in the limitation of numbers for the purpose of selecting proper material, — and have under consideration a provision that there shall be a personal review of the intending student with a carefully selected committee of the faculty for the purpose of ascertaining the desirability of the youth as a member of the undergraduate family."

6. *From a member of the Technology Corporation:*

"In addition to the qualifications mentioned by you on the last page of your address, I should like to suggest that you add the following: 'A belief in the United States, its Constitution, the great opportunities given to young men to achieve success if they will only work, and a robust and virile support of American ideas.'"

Too many instructors in schools and colleges wander off into all kinds of 'isms' and 'fads,' get themselves all askew with the world, and do harm also to the young impressionable men and women with whom they are dealing."

7. *From one of the foremost research physicists in the United States:*

"I have read your article with pleasure (for there is much of it with which I agree). All the same it has left with me a lingering sensation of grief. Truly, you do not have to solicit students to drop mathematics! They manage all that, quite without reluctance, themselves. When compulsory mathematics was discontinued at our university, our classes in physics dropped fifty per cent. Now out of that fifty per cent who followed the urge of the herd instinct and went into 'argumentation', there was probably a secondary fifty per cent with

good statistical minds, who might have profited materially by our teaching for the remainder of their lives. The dormant aptitudes of these men have never even been roused. They come and go befogged by the fancies of youth, with all their slumbering powers hopelessly wasted, because unsuspected. The greatest failure of a student at college is an error in the recognition of himself and the most pitiful, the fashioning of a misfit where a happy adaptation would have been possible.

Anybody who has followed modern thermodynamics in the growth of Planck and Sommerfeld's quantum theory, the theory of discontinuous radiation, the theory of relativity, cannot but be convinced that the most alive thing in the world today is mathematics. It is the most precious and resourceful of all our intellectual possessions, and it should be our duty to bring that fact home, with all the power we can muster, to the world about us. Mathematics does not obtrude. It never advertises itself. It lies so remote from the ordinary trains of thought, it is so easily victimized by the professional jester, that its fundamental importance is often not even suspected. Strange as it may seem, this, the strongest pillar of our modern civilization, is usually overlooked.

The opportunity of a more intimate acquaintance with mathematics comes to a few men only; and to each of these but once in his life, namely at college. It is the most cherished heritage which his student days will have to record. If he fails to make the most of these advantages, he is then done for the rest of his life. The opportunities will never be repeated; for these things are so forbiddingly difficult, that a man in after life, with all disposable leisure and good will, cannot hope for mastery.

What do we see? We have quite a number of boys here keenly interested in Science. You will sometimes find them listening (they have a special passion for listening) for midnight messages, when the prudent should be abed. And what does this activity after due sampling amount to? It is equivalent to the turning of a succession of knobs, to making a collection of wheels go round, etc., not very different from what anybody does who acquires familiarity with the turning of electric switches, or the use of telephones. Few of these excited youths come forward to demand from us an account of present day possessions of electromagnetics, the electromagnetic theory of oscillation and of light. That is too much like mere work. It will never trickle out of the ether unsolicited. And if they now can quote John R. Freeman, none will come at all! Nevertheless, they are missing the choicest gift the college can possibly bestow. Economics, history, biology, even languages they may learn for themselves in maturer life. There will be abundant experiences, endless knobs to be turned and wheels to make go round; but the opportunity for mathematics has passed forever. They have bartered the fine flavor of the philosophy of science for a mess of clap-trap, and the bargain is sealed.

To come to another point. The 'engineer' it seems to me, is not a type, but rather a continuity, as it were. There are all kinds of engi-

neers from the downright business men like Harriman, Schwab and Carnegie, to the pure mathematicians like Navier and Cauchy. The question is then, where in this continuous succession you choose to place your emphasis; whom do you consider exceptionally commendable and what is to be the beau ideal. As to Civil Engineering, the fundamental principles were rigorously laid down by the great Elasticians Poisson and de St. Venant, Clebsch and Kirchhoff, and others fifty to one hundred years ago and the results have since been systematically tabulated. In Mechanical Engineering after passing the dynamic epoch of Newton and Lagrange, the last great conquest was thermodynamics, as threshed out by Carnot and Clausius, Kelvin and Rankine. The progress since, for instance the use of entropy temperature diagrams ultimately referable to Gibbs, is secondary by comparison. Electrical Engineering is in some respects still in the making, though already possessed of more and more varied tools than the mechanical arts.

Now what I want to ascertain is the model of our great engineer, or to determine who are our supremely 'practical' men. Are they not those who furnish the fundamental and trustworthy methods, the men into whose hands were given the very tables of natural law? Is not the highest order of engineering the design of intellectual resources, of a theory that can be stressed recklessly to any degree and that will withstand rough handling to the fool proof point, a theory of such universality as to fit the whole as naturally as it brings order into the chaos of ultimate detail; that needs mere specialization to be lucid and simple, but retains throughout all possible integrations an unimpaired interpretative sway? If these masters had left no legacy would our visions, however alluring, be more than the visions of a dream? In fact would there be any visions at all? — for all visions are essentially a modified reproduction of something seen before.

Well, it all depends where you put your stress on this continuity of engineers. I would probably stand nearer the mathematician than you do; and I think a message, advising the student in the strongest terms possible, that here, in his college career, an opportunity of inestimable scope is confronting him, eager to be of service; but coming once, it will never come again. I think that such a message would be more salutary than yours, which merely adds to his inborn inertia one drag more. You stifle the virgin keenness of his thirst for knowledge with a potion which, afterwards, he will have to drain anyway (*ad nauseam!*) to the end of his life.

The quantum of today will be the engineering unit of our children who will get their energy out of the atom."

8. *From a Professor Emeritus of Technology:*

"The view you hold regarding the nature of the test which should be applied to candidates for admission to Tech appears to agree closely with those expressed to me by the head of one of our foremost engineering organizations in the United States, and an active college trustee.

He believed the prevailing method of listing candidates for admission to our technical schools to be cruelly wrong. Only men of engineering capacity should be admitted to those schools, and the purpose of admission tests should be to measure that capacity. No amount of study and will can create an engineer. If a student has not the capacity — to receive and to attempt to transform him into an engineer, is only to waste his time and money and to add heavily to the wearing load which hampers the work of the instructor and of the school."

9. *From a generous giver to institutions of learning:*

"One great advantage possessed by the institution supported by endowment over that supported by the State, is that it can exercise greater freedom in selecting its students and rejecting those candidates for admission who may appear the least capable of benefiting by the opportunities which it offers."

A NEW IDEA

UNDER the title "A New Educational Bill of Fare," the following appears as the first paragraph of an article in the current issue of *The Nation*:

"The process of education will continue to be what it generally is today, a dusty, tiresome discipline, until one important thing happens — until people who are subjected to learning become smitten with a desire to learn. And that will come about only when students attain some control over their studies; when they help compose the bill of fare, not merely eat the food. Of course the mental lassitude of most American college students in the face of their academic activities makes it difficult for them to undertake, even if they were permitted to, the making or remaking of their curriculums; thus a vicious circle is joined and scholarship languishes. Occasionally one sees signs, however, which cause the heart to leap with new hope. The Student Curricular Committee at Barnard College has lately set such a sign in the sky, and all who feel an interest in higher education in America should turn their eyes that way. The committee has worked out a plan for the complete remaking of the curriculum of Barnard — which is nearly identical with that at Columbia — and the result is stimulating to a degree." — *Daily Nebraskan*

A BRIEF HISTORY OF THE WASHINGTON SOCIETY OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

BY JAMES A. TOBEY, '15

Secretary, Washington Society of Massachusetts Institute of Technology

OF the fifty-eight local alumni associations of the Massachusetts Institute of Technology, the Washington Society was the eighth to be organized. The first was Chicago, formed in 1887, and the others whose formation preceded Washington were Denver (1889), New York (1895), Connecticut (1895), Boston (1896), Philadelphia (1896), and Buffalo (1898). The Washington Society of the Massachusetts Institute of Technology was organized on February 18, 1899 when twenty local alumni met at Columbian (now George Washington) University at the call of R. E. Bakenhus, '96. A committee consisting of Henry A. Pressey, '96, as chairman; R. E. Bakenhus, '96, secretary; and F. H. Newell, '85; T. T. Dorman, '93; and F. H. Howland, '93 was appointed to formulate a definite plan for the society. This committee drew up the first Constitution, which was adopted at a subsequent meeting on February 25, 1899. Officers were elected at this meeting as follows: F. H. Newell, '85, president; H. A. Pressey, '96, vice-president; R. E. Bakenhus, '96, secretary; F. H. Howland, '93, treasurer; and F. E. L. Beal, '71, member of the executive committee. These officers were also re-elected for the year 1900.

The key-note of the organization was a desire to maintain the Technology spirit, as the graduates and former students felt a strong bond of sympathy and a desire to see more of one another. It was soon found that there were a great many Technology men in Washington and vicinity. Graduates in the states of Maryland, Virginia and West Virginia, as well as the District of Columbia, were accordingly included in the Society in order that all of the Tech men in this locality might feel that they had a local headquarters. A directory of these Tech men was published in pamphlet form in April, 1899, and contained the names of 112 alumni, 55 of whom were members of the local Society. In 1902 there were 62 members, in 1904 the membership had increased to 122, and in 1910, when a second directory was issued, there were included the names of 159 men in Washington and 70 in the vicinity. Of this total of 238, the active members numbered 72. The third directory is now in preparation and will contain about 300 names.

Some of the early meetings of the Society were held in the Octagon House, which was the home of President Madison after the burning of the White House by the British in the War of 1812, and other meetings took place at various local hotels. At one of the first meetings of the

Society, Mr. Alexander Graham Bell related in a most interesting way the story of his invention of the telephone, and of its intimate relationship, in the early days of his struggles, with his romantic love affair. At this same meeting another of the speakers related his experiences during the visit of the Emperor Dom Pedro of Brazil to the Naval Observatory, and attention was called to the coincidence that the Emperor was one of the first to speak over the telephone which had just been invented by Mr. Bell. At one of the smokers at the Octagon House, in March, 1900, the speaker was Henry S. Pritchett of the United States Coast and Geodetic Survey. Later, on March 30, 1901, the Society held a reception at the Cairo in honor of Dr. Pritchett, who had succeeded James M. Crafts as president of the Institute. Again on December 7, 1903 and in 1905 on December 14, President Pritchett was the guest of the society at the annual banquets. The Washington alumni have been fortunate in being able to greet several of Tech's presidents. On April 21, 1908, Dr. Arthur A. Noyes, acting president was the guest of honor, other speakers including the following members of Congress: Hon. Butler Ames, '96; Hon. S. W. McCall; Hon. J. M. Miller; and Hon. C. R. Thomas. A notable reception and dinner was held for President-Elect R. C. Maclaurin on February 6, 1909. Dr. Maclaurin was again the guest of the society on January 22, 1912, when he outlined plans for the new Technology at a banquet held in the Arlington Hotel.

The lack of a definite home for the Washington Society was felt from the time it was organized. On October 31, 1902 a meeting was held to consider the formation of a University Club. A permanent committee, comprising representatives from all local college societies, was appointed on July 18, 1903, with P. L. Dougherty, '97, then president of the Washington Society of Massachusetts Institute of Technology, as chairman. On July 15, 1904, the Tech Society held the first college smoker in the new University Club at Sixteenth and K Streets. In the following years frequent smokers and meetings were held in the University Club, and weekly lunches have been held by the Society in the present splendid club house at Fifteenth and Eye Streets for the past two years. Mr. P. L. Dougherty, '97 is now serving as secretary of the University Club.

During the twenty-three years of existence of the Washington Society many notable and interesting events have taken place. Lack of space precludes mention of all of them, but some of the more important will be touched upon, in addition to the functions already described. Beginning in 1899 an annual banquet has been held with one or two exceptions. Weekly lunches were inaugurated on May 5, 1909 and continued until late in 1911 when they were discontinued. The lunches were revived in 1920 and have continued to date with increasing success. A Tech bowling team graced the alleys between 1909 and 1911 and in 1916 the Tech Orchestra made its appearance. A number of enjoyable picnics took place in 1917 and 1918.

The Society has always actively engaged in the various Institute

projects dependent upon alumni support. In 1904 the proposed merger with Harvard was vigorously discussed. The Walker Memorial Building Fund and the Income Fund of these days were supported. The Reunion in Boston in June, 1909 was largely attended, as was also the dedication of the new buildings in June, 1916. The Society became a member of the Technology Clubs Associated in January, 1913.

When the United States entered the World War in 1917, the Tech alumni in Washington had already formed a local committee on the mobilization of Technology's resources. This committee held many meetings under the chairmanship of W. H. Keen, '05. During the course of the war, many Tech men came to Washington and a branch headquarters of the Technology Clubs Associated was located in the city. The Washington Society was very active during this entire period.

Among the activities of recent years may be mentioned the 1920 Technology Endowment Campaign in which the Washington Society exceeded its \$15,000 quota by over \$1,000. There were one hundred and forty local subscribers. On December 30, 1920, the Combined Musical Clubs of the Institute entertained at a notable concert and dance at Rauscher's. Nearly three hundred persons were present at this function, which was directed by James A. Tobey, '15, as chairman of the committee in charge. A banquet was held on February 2, 1922 at which John R. Freeman, '76 was the chief speaker. Beginning February 24, 1922, the weekly lunches have each had a ten minute speaker, some of the most prominent men in the city having been included.

In this brief sketch of the history of the Washington Society of Massachusetts Institute of Technology we have, of course, been able to give only a general outline of the career of the Society. There is one thing to which no pen can do justice in these pages. It is that intangible thing known as the Tech spirit. Throughout these years, which are now fading fast in memory, this feeling of loyalty, of respect, and of love for our alma mater has never ceased to endure and to grow. And it never shall.

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IN THE PUBLIC EYE

H. A. BALDWIN, DELEGATE TO CONGRESS FROM HAWAII

HARRY ALEXANDER BALDWIN, '94, IX, the new delegate to Congress from the Territory of Hawaii, was born at Paliuli, Maui, in the then Kingdom of Hawaii, on January 12, 1871. On both sides of the house, the Baldwins and the Alexanders, he is a grandson of the pioneer missionaries who came to the "Sandwich Islands" a little more than a century ago.

At the time of the birth of his son, Henry Alexander, the father, Henry Perrin Baldwin, was employed on a sugar plantation of the Island of Maui and was in very moderate circumstances, walking to the fields and carrying his luncheon with him. Later Henry P. Baldwin developed and firmly established the largest sugar enterprises on the island of Maui, acquiring also the Spreckles interests.

As his father built up the family fortunes there resulted for Henry A. Baldwin educational opportunities which would otherwise not have been his. His early education was in the grammar schools of his home island and later in the grammar schools of San Francisco. He returned to Hawaii and attended Cahu College (now Punahou school) in Honolulu. From there he went to Phillip's Andover Academy and was a student at the Institute from 1890-94, after which he returned to his home island.

Henry P. Baldwin, the father, having been the builder of his own fortune and of great business enterprises, which he expected to turn over to his children, demanded that his sons should learn the business from "the bottom up," and put young Harry to work, first as a timekeeper and then as a "luna" (overseer or section boss), and was a more exacting employer than would have been a stranger. He started his son at work on the Haiku plantation in 1895, and the young man would spend the greater part of the day in the saddle or walking the fields, lunching with the others, and often spending nights with them in the cottage for the white employes. In two years Henry A. Baldwin had become manager of Haiku plantation, which position he retained for seven years. He is one of the hardest working men in the territory, out in the saddle long before breakfast, and then dividing his time between field and office.

In 1904 a co-partnership was formed of the Haiku and Paia plantations under the name of Maui Agricultural Company, and Henry A. Baldwin became its manager, later a director of the company and still later president-manager.

He married Ethel Frances Smith, daughter of W. O. Smith, of Honolulu, in 1897, and they have one daughter, Frances Hobron Baldwin. When Hawaii was annexed to the United States, Baldwin automatically became an American citizen.

In July, 1911, Henry P. Baldwin died and Henry A. Baldwin

became the head of the family whose interests at that time had further vastly increased.

In sporting and athletic affairs Baldwin has been prominent as a player on the champion team of the islands for several years, a player until two or three years ago, and since then an official at all of the more important matches. He has a fine stable of polo ponies and a string of excellent running horses as well. He has been a large importer from the mainland of blooded horses, cattle and swine, and has done much to improve the best strains of the islands through such importations. He is quiet of manner, rather retiring in disposition, but approachable always and a genial companion.

His business interests are large in addition to the Maui Agricultural Company, which receives the greatest share of his attention. He is president of the Baldwin Bank, Ltd., Haleakala Ranch Company and the Maui Publishing Company, and a director in the Kahului Railroad, East Maui Irrigation Company, Haiku Fruit and Packing Company and the Baldwin Packers (both pineapple growing and packing concerns), the Maui Telephone Company, Alexander & Baldwin, one of the largest plantation agencies in the islands, and of a number of other concerns, as well as the Maui Chamber of Commerce and the Maui County Fair and Racing Associations.

Politically he has always been a Republican since Hawaii became a part of the United States. After his father's death he became a leader in the party's political affairs of his home island and was elected to the Territorial Senate in 1913 and continued a member until his election as delegate to Congress. His election was by the largest vote and the largest majority ever given a candidate for office in the Territory.

Baldwin and his family are especially active in public welfare work. They have erected and maintained a home for aged men at Makawao and a school for girls, primarily Hawaiian girls, Maunaolu Seminary, near by. They were directly responsible for the erection and maintenance of Kula Sanitarium for Tuberculars on the slopes of Haleakala at an altitude of three thousand feet, where there are cared for about two hundred patients, and Baldwin pushed the bill through the Legislature under which Maui is taxed one hundred thousand dollars annually for the support of the sanitarium. He is on its directorate. Maui Aid for fostering religious work is financed chiefly by the family, as is Alexander House Settlement, an all Maui welfare institution; Baldwin House, a similar institution at Lahaina, Maui, and on the Baldwin plantations are theatres, community houses, playgrounds, athletic fields, kindergartens, dispensaries and other institutions for the comfort, pleasure and health of the employees. In their benefactions they are non-denominational and non-sectarian, contributing as liberally to Catholic as to Protestant charities and helping poor churches of the Protestants, Catholics and Mormons.

To accept the call of his party and people and go to Washington the new delegate has had to leave these great business and social inter-

ests and his sacrifice has been financial and personal, for his inclinations are all towards his home.

MUSSEL SHOALS, MUCH DISCUSSED ALABAMA PLANT, DESIGNED
BY OSCAR G. THURLOW, '04, I

MUSSEL SHOALS in Northwestern Alabama has been in the public eye ever since Henry Ford has offered to take over the plant on a long term lease from the United States government. That of itself has been interesting to the country at large inasmuch as the war department had expended \$106,000,000 there before the armistice had been signed. But it is of much more interest to Newburyport, Mass., that one of its native sons, Oscar G. Thurlow, was in charge of the development of the Mussel Shoals power proposition.

He it was who as an engineer became interested in the development and became the pioneer engineer on the job. His studies, plans and reports were offered to the war department after the United States entered the World War in 1917, and were accepted and adopted, Mr. Thurlow being retained as consulting engineer, and his advice being frequently sought, as shown by the War Department records of the work done that have been furnished to the Congressional Committee.

Mr. Thurlow has been interested in and studied the Mussel Shoals proposition ever since he became connected with the Alabama Power Company ten years ago. It was shortly after he entered that company's employ that he was sent to Florence, Ala., and for two years he made preliminary studies, drafted the designs and working plans in detail and prepared extensive reports on the possibilities of the waterpower developments of Mussel Shoals.

Mr. Thurlow has for the past five years served as chief engineer for the Alabama Power Company, and his company has become a formidable competitor to Henry Ford, as it has offered to complete the Wilson dam at Mussel Shoals at its own expense.

This offer of the company represents an estimated outlay and investment of \$30,000,000 as contrasted with the request of Mr. Ford that if he leases the plant from the United States he would expect \$45,000,000 to complete the project.

The original designer of the Mussel Shoals plant has been in Washington during the congressional investigation as one of the most important members of the staff of Thomas W. Martin, the president of the Alabama Power Company, which seeks to regain control of the plant, the plans of which it turned over to the War Department in 1917.

As chief engineer Mr. Thurlow is responsible for the development of his company, which daily serves 17,000 customers, including five street railway systems, and furnishes power to industrial plants all over Alabama as well as supplying cotton mills in North Carolina with power. — *Newburyport News*, March 10, 1922.

J. D. MACKENZIE, '11, III. In the earnest attempt, during the past two years or so, to stimulate interest in the work of the Institute in

British Columbia, none has striven more energetically and zealously to promote that aim than the subject of this sketch. A worthy son of that eastern Province, which so many of the Dominion's most distinguished statesmen, publicists, men of affairs, and scientists, are proud to claim as their own, Mr. MacKenzie was born at Baddeck, Cape Breton, in 1888. At the age of sixteen he had launched himself on a career of independence; and going to Boston, he earned enough to keep himself, the while studying at night schools in order to qualify himself to pass the matriculation examination of the Massachusetts Institute of Technology. Self-supporting still, he put himself through college, and in 1911 graduated in mining engineering. Meanwhile he had decided to specialize in geology, and to this end he employed his summer vacation, both when an undergraduate, and for five years after he had obtained his degree, in geological field work with the Geological Survey, by which department he was at first employed as a field assistant in Nova Scotia, then on Vancouver Island, and subsequently as an officer in charge of field parties on surveys in south-western Alberta on Graham Island, B. C., and in northern British Columbia.

In the autumn of 1911, Mr. MacKenzie was appointed instructor in geology at Cornell University; but in the following year he resigned this position to assume similar duties at his Alma Mater. Here, as at Cornell, he pursued postgraduate studies, which led, in 1916, to the degree of Ph.D., granted him by the Massachusetts Institute of Technology.

In April, 1916, Mr. MacKenzie enlisted as a private in the 185th Cape Breton Highlanders, but in June of the same year he was promoted to a lieutenancy, and was despatched over-seas with the 85th Nova Scotia Highland Brigade. In France he distinguished himself when in command of the Cape Breton Company of the 85th Battalion, and in recognition of his gallantry during certain operations east of Rosieres-en-Sauterne, on August 10, 1918, he was awarded the Military Cross. Three weeks later he had the misfortune to be severely wounded and was placed *hors de combat* until long after the close of the war.

After receiving his discharge from hospital in June, 1920, Mr. MacKenzie rejoined the staff of the Geological Survey, and in October of that year was placed in charge of the British Columbia office, in succession to Mr. Camsell. In 1920, also, he became a member of the Institute, and at once interested himself keenly in its activities. Last spring he was elected a member of the Administrative Committee of the B. C. Division, and in that capacity has done yeoman service. Incidentally it may be remarked that this committee has held thirty business meetings during the past year, so that membership thereof is clearly no sinecure. — *Bulletin of the Canadian Institute of Mining and Metallurgy*.

H. M. HAVEN, '95, and A. T. HOPKINS, '97, incorporated recently as consulting engineers and industrial managers. The firm was formerly H. M. Haven and William W. Crosby, Inc., 40 Court Street, Boston,

Mass., the new firm having been organized shortly after the death of Mr. Crosby. Mr. Hopkins was in charge of the reorganization and rebuilding of the Cleveland, Ohio, plant of the United States Rubber Co. from 1912 to 1917, and was industrial engineer for the company from then until his recent association with Mr. Haven. Both are graduates of the Massachusetts Institute of Technology.

TYLER W. CARLISLE, '10, II, member of the machine tool manufacturing firm, Strong, Carlisle & Hammond Co., has been elected president of the Cleveland Rotary Club. Mr. Carlisle also is a member of the Chamber of Commerce and the Union Club. He was chosen from a field of ten directors who organized a new board at the club's annual meeting Monday night in Hotel Statler.

FACULTY MEN IN THE PUBLIC EYE

WILLIAM STODDARDS FRANKLIN

To measure the indebtedness of a rapidly developing industry to those who teach its underlying science is an almost impossible task. The ever-invisible limits of a capable teacher's influence expand with the years. His personality and work bear fruit in the success of the men who are out attacking the complex problems of the day through effort made more effective by rigorous training. The rewards of a true teacher of science may never be gathered together for enumeration, but the reality of his influence is no more to be doubted than the power of current thought in controlling the affairs of men. Happy, therefore, should be a man like William S. Franklin, who considers teaching "the greatest of fun," and who finds himself after thirty-five years of service keeping the scientific faith with keen enthusiasm for its advancement and a wise comprehension of the limitations and possibilities of the student.

Professor Franklin was born in Geary City, Kansas, October 27, 1863, and was educated at the University of Kansas, at the University of Berlin and at Harvard University, where he held the Morgan Fellowship in 1891-2. Later he studied at Cornell University, from which he received the degree of doctor of science in 1901. From 1887, when he took the post of assistant professor of physics at the University of Kansas, Professor Franklin has concentrated his attention upon this branch of science, also teaching electrical engineering at Iowa State College from 1892 to 1897 and at Lehigh University from 1897 to 1903. From 1903 to 1915 he occupied the chair of physics at Lehigh. In 1917 he was called to the Massachusetts Institute of Technology as lecturer in physics, and in 1919 he was made full professor of that subject.

Dr. Franklin is known widely outside academic circles as an author of numerous papers on scientific subjects, and within the allied fields of electricity and physics his output in the form of singularly lucid and usable textbooks has won him a national reputation as an educator. Among his works, written individually or as co-author, are volumes on electrical engineering, alternating currents, generators and motors, "Electric Waves," "Elements of Mechanics," "Elements of Calculus," a "Calendar of Leading Experiments," "Practical Physics," and "Bill's School and Mine," a collection of pungent essays on education. Professor Franklin's originality of viewpoint on educational matters and his championship of clarity in instruction without committing "the fatal error of being exacting and unintelligible" are equaled by his loyalty to the scientific spirit—a devotion which loses nothing from his interest in the "humanities."

Dr. Franklin is a member of many scientific societies, is a fellow of the American Association for the Advancement of Science and past-chairman of the physics section, past-president Iowa Academy of Sciences, former councilor Society for the Promotion of Engineering Education and a member of the American Physical Society. During the summer of 1918 he investigated aëronautics at the Bureau of Standards, Washington, and he is continuing researches in this field for the government at the Massachusetts Institute of Technology.—*The Electrical World*.

BOOK REVIEWS

Texts by Technology professors

IN the May bulletin of John Wiley & Sons, Scientific Publishers, an excellent showing of text-books by Tech professors is to be found. Texts by Professors Timbie and Bush of Course VI, Phillips of the Mathematics Department, Hayward of Course I and Mulliken of V, as well as a popular old book by Schwamb and Merrill of Course II. Professor Schwamb resigned years ago, but his soul goes marching on in this book.

"ELECTRICAL ENGINEERING" BY TIMBIE AND BUSH.

Prof. William H. Timbie has written a new college text, in collaboration with Dr. Vannevar Bush. It is called "Principles of Electrical Engineering" and is, from cover to cover, a college text for college students.

This new text is intended for students who have completed courses in calculus and have had substantial courses in physics. It is *not* a complete condensed treatise on electrical engineering, but is merely a first course, to be followed by detail courses on direct current and alternating current machinery electrical engineering.

Prof. W. H. Timbie has an enviable reputation as the author of an important list of books on electrical engineering and applied electricity, and as a teacher. He is at present associate professor of electrical engineering at the Massachusetts Institute of Technology, where his principal duty is the supervision of the coöperative course in electrical engineering. During the war he was editor-in-chief of the Committee on Education and Special Training in the War Department at Washington. He is joint author, with Professor Higbie, of the well-known book, "Alternating Current Electricity," and the author of several other successful texts.

Dr. Vannevar Bush is associate professor of electrical engineering and acting director of the Electrical Engineering Research Division at the Massachusetts Institute of Technology. He did distinguished service in the New London researches of the United States Navy for the detection of submarines. He is prominent among those engineers who are developing the modern mathematical theory of electric circuits, having published several articles in this connection, and is at present in charge of the Research Laboratories of the American Radio and Research Corporation.

The publishers have received many letters of commendation from prominent engineering schools, where the unusual teaching qualities of this new text have already become apparent. One professor calls it "the best book yet published for use with second and third-year men." Another refers to it as "a refreshing departure, in many places, from

previous textbooks of its kind." There is every indication that it will be widely used during the coming college year.

PHILLIPS' NEW "DIFFERENTIAL EQUATIONS."

The announcement of a new text by Dr. Henry B. Phillips, of the Massachusetts Institute of Technology, naturally arouses great interest among teachers of mathematics. His well-known texts on differential and integral calculus and analytic geometry have proved their excellence so many times and in so many places that much is expected of the book which is just off the press.

The new text deals with "Differential Equations." It covers the solution of the ordinary types of differential equations, and, in addition to the formal exercise in solving these equations, it gives a thorough drill in the solution of problems in which the student sets up and integrates his own differential equation.

For this purpose, certain topics of mechanics and physics, needed in groups of problems, are briefly presented in the text.

An interesting and valuable feature of the new book is the large number of examples involving practical applications of differential equations to the work of the engineering student.

Ever since their publication several years ago, Dr. Phillips' "Calculus" and "Analytic Geometry" have been steadily gaining new friends. For example, the sales of the "Calculus" in 1921 were fifty per cent greater than in 1920, and one hundred per cent greater than in 1919.

Prominent among the users of these books are the Universities of Pennsylvania, Washington, Toronto, Utah, Georgia and Colorado, Ohio State University, Purdue University, Michigan College of Mines, Massachusetts Institute of Technology, California Institute of Technology, Colorado School of Mines, and Rutgers College.

H. W. HAYWARD REVISES MILLS' "MATERIALS."

In 1915, the late Prof. A. P. Mills, of the College of Civil Engineering, Cornell University, published a text entitled "Materials of Construction," which won for itself recognition as an ideal textbook. Since that time it has had a wide use in engineering colleges. Because of the author's untimely death from influenza, while in the service in France, it was impossible to issue a new edition until Prof. Harrison W. Hayward, of the Massachusetts Institute of Technology, a great admirer of the book, expressed his willingness to take charge of a revision.

Associated with him in this task were Prof. Henry Fay, who reviewed the chapter on Steel; Prof. R. S. Williams, who reviewed the chapter on Stone and Timber; Prof. G. B. Haven, who prepared the new chapter on Mechanical Fabrics; and Mr. Dean Peabody, Jr., who rewrote the chapter on Concrete.

In order to keep the selling price of the book as low as possible, with a view to its wide use in engineering, the editor has succeeded in reducing the pagination of the book from six hundred eighty-two to four hundred seventy-six pages.

VOLUME IV OF MULLIKEN'S "METHOD FOR IDENTIFICATION OF ORGANIC COMPOUNDS" NEARLY READY.

ORGANIC chemists everywhere will be interested to learn that the long-awaited fourth volume of this important work has been for some time with the printer and will soon be obtainable.

The coming volume furnishes analytical descriptions of about thirty-seven hundred compounds, belonging to fourteen of the previously untreated "Orders," or groups of chemical species containing identical elements. The issue of this volume renders the "Method" a well-rounded whole.

WEALTH AND INCOME OF THE AMERICAN PEOPLE; A Survey of the Economic Consequences of the War, by Walter Renton Ingalls, '86, Consulting Mining and Metallurgical Engineer; Director of American Bureau of Metal Statistics; former editor *Engineering and Mining Journal*; past president Mining and Metallurgical Society of America. Published by G. H. Merlin Company, Philadelphia. Sold by subscription only.

"The author of this book says in his sub-title that it is an economic survey of the consequences of the war to the American people. In truth it is vastly more than that. It is in fact a broad survey of American finance and industry. It treats of the American people as a whole, summarizes their foreign accounts, and inventories their physical wealth — land, mines, railways, machinery, etc. It considers the distribution of that wealth and the changes that the war brought about. It reports the national income and the distribution thereof, the national living expense and the national savings. It makes the fundamental analysis of position that every head of a business makes and that every head of a family ought to make to ascertain how he stands. Multiply the position of the average family by twenty-six million and we have the position of all the families — the nation.

This is the most comprehensive essay into the new field of quantitative economics that there has been. Quantitative economics means the measuring of affairs and conditions, and the consideration of them as they are. The author is an economist who is fundamentally an engineer. As an engineer he has constructed his book on the lines of an engineering report, first marshalling his facts and then drawing his deductions. No one of less experience as an engineer, economist and statistician could have done this in the present way. The work is replete with original research and it will be a guide-post for future work in practical economics.

In his conclusions the author is sober, even sombre, but he writes with a style that is unique and lively. With his pen, economics ceases to be the dismal science and becomes a thing alive, breathing with human interest. Anybody will discern immediately that the author sees in business the most romantic thing in life, and he has accomplished the feat of putting romance into economics. Unlike many academic stodgy treatises his book reads like a novel.

After drawing his conclusions from the established facts the author considers the directions whither we are trending. He sees an impairment even in America's position as a result of the war and foresees troublesome times ahead. He considers that difficulties will most surely and most quickly be mastered by dispelling illusions and facing the facts. He is an exponent, not of pessimism but of clear thinking. In his view, the one good thing coming out of the war is the education of business men, leading them toward the creation of transparency in industry, which will tend to produce equilibrium in industry. This may eventually prove to be worth the cost of the war.

The author has become well known by his previous economic writings as a courageous and outspoken exponent of capitalistic doctrine. He abhors socialism and has no patience with ideas about industrial democracy. His remarks, always pungent and often brilliant, will no doubt excite violent dissent in some quarters, but it will be found that he has so well established his facts, that anybody who undertakes to controvert conclusions that they may not like will have to do a lot of thinking. The book combines the qualities of being a major hand-book for business guidance, a compass for the direction of future economic investigations, and a stimulus to philosophical and political thinking. As a hand-book alone its facts and figures are of a nature that will lead every banker not only to study it, but will also make him want to keep it on his desk."

THE EDMANDS PATHS AND THEIR BUILDER. Reprint from *Appalachia*, Vol. XV, No. 2, August, 1921. By Louis F. Cutter, '86.

This is a pamphlet dealing with the work of J. Rayner Edmands, '69, II, who died in 1910. Mr. Edmands was a noted member of the Appalachian Mountain Club and well known as a trail-builder, having engineered many paths on the Presidential Range. The pamphlet says:

"Mr. Edmands' first visit to this region was about 1868 when, as a lad, he spent some time at Jefferson Highlands. In the course of the visit he and several other boys went up into the Cascade Ravine, visited most of the cascades and gave names to some of them. In 1876, when the Appalachian Mountain Club was founded, he became a member, held office almost from the start, and was a member of the council every year but one until 1886, in which year he was president. Later he was on the council again in 1893 and 1894, and for the last seventeen years of his life, 1894 to 1910, he was one of the club's trustees of real estate.

In all these early years, the need of better paths must have been very evident to Mr. Edmands, but he does not appear to have been active in making them. After the 'time service,' formerly performed by Harvard under his personal care, was taken over by the Naval Observatory at Washington, his work in Cambridge became less confining, and he could leave it for longer periods. Then Mr. Edmands gave himself with great enthusiasm to the making of paths and camps, and later to the establishment of public reservation in the mountains,

and to the agitation for national forests in New England, which in the end brought about the passage of the Weeks Act.

Mr. Edmands has told me that his mountaineering in the Rockies in 1888 and 1890 had a great deal to do with his later activities in path making. The graded mountain trails made by miners and others in Colorado were a revelation to him, and he saw at once that similar paths could be made here. In July, 1891, he began the work that was to continue for the rest of his life."

Journal of Mammalogy, Vol. II, No. 3, August, 1921. Article on A SILK BUFFALO ROBE, BY EDWARD R. WARREN, '81.

Mr. Warren is also the author of a monograph on "The Small Mammals of Colorado," published by the Colorado Mountain Club.

ASSOS: DRAWINGS AND PHOTOGRAPHS OF THE BUILDINGS AND OBJECTS DISCOVERED DURING THE EXCAVATIONS OF 1881-1883. Published by the Archaeological Institute of America by a committee: Charles Eliot Norton, John Williams White, William Fenwick Harris and Francis H. Bacon. Five hundred and twenty-five volumes have been printed to be subscribed for at forty dollars each. Address Prof. W. F. Harris, Cambridge.

This magnificent volume of the results of a famous excavation is edited by Francis H. Bacon, '77, one of the three original investigators of the city, and largely illustrated with his drawings of ruins and restorations. Prof. William F. Harris writes:

"They (Norton and White, now both dead) would be the first to congratulate Francis Bacon on the splendid and patient work he has done. To carry on the occupations of a busy life, and in hours which most men would devote to pleasure and relaxation to decipher notes taken by others many years ago, to edit a great book which he never dreamed would be his task, to find the time to make repeated visits to Assos in order to solve puzzling questions, confirm new theories, and to verify or correct old ones—these Bacon has done. And he has created a book of beauty such as those who have seen it and have a right to an opinion, pronounce a work of art. His modesty everywhere conceals his own part, but archaeologists, architects, scholars, and lovers of beauty are under deep debt to him. He has been prodigal of his own time, money and ability.

"Most of the plans and drawings of elevations, details and restorations are the work of Mr. Francis H. Bacon, in his peculiar and most beautiful style as a draftsman, a style which is one of the most, if not the most, satisfactory, that has ever been attempted for the rendering and interpretation of ancient classical architecture. One is by his brother, Henry Bacon, the gifted architect of the Lincoln Memorial in Washington. No picture or word description could be more illuminating to the youthful or to the experienced student of Greek architecture and of Greek life, than Mr. Bacon's "Restoration of the Agora at Assos." No rendering of any sort, or in any medium, could better depict the

delicate, artistic charm, and the logical constructional processes of the architecture of Greece than the pen-drawing of the Vaulted Tomb. These drawings give us not only a sense of refined and dignified beauty of the monuments of Greek and Hellenistic architecture; but are proof in themselves of the accuracy and fidelity to truth with which they were executed. No detail, however minute, is lost in the restorations, and the large-scale drawings of various details will be of great value, not only to the architect, but to all students of Greek architectural ornament. The verbal descriptions which accompany the drawings are concise, clear and to the point."

MAKING A RECORD IN MECHANICAL ENGINEERING.

ON the two counts of longevity and continued vitality, there is probably no textbook in the mechanical engineering field which can show a better record than the "Elements of Mechanism," by Prof. Peter Schwamb, A. L. Merrill and W. H. James, of the Massachusetts Institute of Technology.

Published first in 1886 in the form of notes, it has been an increasingly popular textbook right down to the present date. In fact, the sales to colleges for the new Third Edition, in 1921, exceed those of any previous year by nearly one hundred per cent. The book is now an adopted text in more than fifty colleges, where it seems to be giving very general satisfaction. In speaking of the new Third Edition, one professor said, "It is an unusually well written text, both in the subject matter selected and in the method of treatment." Another wrote, "I think that perhaps the most noteworthy revisions are the greater number of figures and problems for the student, both of which tend to clarify the context."—*The Wiley Bulletin*.

PRINCIPLES OF ALTERNATING CURRENTS. BY RALPH R. LAWRENCE, ASSOCIATE PROFESSOR OF ELECTRICAL ENGINEERING, MASSACHUSETTS INSTITUTE OF TECHNOLOGY. Published by McGraw-Hill Book Company, New York, N. Y. 432+xiv pages, illustrated.

THIS textbook covers the fundamentals of electric circuits in a way which will prove clear and interesting to readers having a thorough preparation in physics and in mathematics through the calculus and the elements of differential equations. Its place is thus the classroom of the high-grade engineering school, or the reference library of the trained engineer who wishes to "brush up" on theory from time to time.

AN INTRODUCTION TO THE STUDY OF FOSSILS. By HERVEY WOODBURN SHIMER. Cloth, 8vo; 450 pp.; 175 text figures; \$3, postage paid.

THIS is a textbook on the study of fossils, the author being associate professor of paleontology in the Massachusetts Institute of Technology. Through this work the student is enabled to connect the present living plants, invertebrates and vertebrates with those existing in bygone eras. The book is of much value to the geologist, paleontologist, etc.

NEWS OF ALUMNI ASSOCIATIONS

CHICAGO — TECHNOLOGY CLUB OF CHICAGO.— Twenty-eight men attended the annual meeting of the Technology Club of Chicago on Tuesday, April 25, and unanimously elected the following officers for the ensuing year: President: R. D. Flood, '96, 226 West Adams Street, Chicago; vice-president; H. W. Kern, '90, 179 West Washington Street, Chicago; secretary-treasurer, R. W. Weeks, '13, Purchasing Department, Pennsylvania Railroad, 323 South Wells Street, Chicago.

Because of Kern's effective work in raising the guarantee fund for the Musical Clubs Concert, and Week's efficiency in arranging for refreshments for the last outing and general publicity, the Nominating Committee described the candidates as "Flood to accept the glory, Kern to raise the money and Weeks to do the work."

It was a luncheon meeting and after calling the men to order the retiring president, J. M. Frank, '07, briefly spoke of the cordial support given the Club during the past year by the local Technology men, two hundred fifty-seven out of three hundred sixty-seven in Chicago having shown interest during the year. Frank said he had enjoyed his year as president and felt that the interest and enthusiasm would continue to grow.

Then the retiring secretary-treasurer, D. A. Tomlinson, '12, presented the treasurer's report. It showed total receipts of about three thousand dollars of which over half was due to the concert, with a final balance on hand of \$184.90, or ten dollars more than the amount on hand at the beginning of the year. A few "vital statistics" were also presented, including the following:

Names on list April, 1921.....	341	
Names on list April, 1922.....	367	
Men paying dues.....	147	40%
Men showing interest.....	257	70%
Attendance at Summer Outing.....	59	16%
Attendance at Joint Outing.....	25	7%
Attendance at Annual Dinner.....	105	29%
Men attending Concert.....	150	41%
Total Concert Attendance.....	550	
Average Attendance at Lunches.....	20	6%
Smallest Lunch July 5.....	8	2%
Largest Lunch November 15.....	37	10%

In arousing interest in Technology matters this year, eleven thousand postcards, thirty-five hundred sheets letterhead, one thousand sheets plain paper, and five thousand envelopes were used; one mile of postcards and one and one-half miles of paper and envelopes.

G. B. Jones, '05, chairman of the Nominating Committee, then reported the nominations. Lonsdale Green, '87, moved that the can-

didates be unanimously elected. Keith, '00, seconded the motion, and it was carried unanimously. Thereupon Flood, '96, the new president, took the chair, and in a most impressive manner expressed his great appreciation of the honor which had been conferred upon him. Before he spoke no one had realized the magnitude of the honor, but when he finished everyone realized the great dignity of the high office of president and that Flood would defend its dignity with his very life. In conclusion he asked Kern and Weeks to make the plans for the summer outing and report as soon as possible. Kern and Weeks were called on and each briefly thanked the Club and promised to do their best to advance the interests of Technology in Chicago.

The following twenty-eight men were at the meeting: Andrews, '94; Baxter, '14; Bumstead, '93; Bentley, '08; Bollenbacher, '09; Blunt, '74; Brown, '97; Blake, '06; Bounetheau, '09; Clarke, '04; Frank, '07; Flood, '96; Green, '87; Hammond, '91; Fitzgerald, '02; Ingalls, '00; Jones, '05; Keith, '00; Kern, '90; Lowe, '05; Merrill, '19; Montgomery, '79; McCausland, '18; Palmer, '04; Pemberton, '03; Taylor, '14; Tomlinson, '12; Weeks, '13. — *D. A. Tomlinson, Ex-Secretary*

SECOND REPORT

Since the last issue of the TECHNOLOGY REVIEW, the Technology Club of Chicago has installed a new set of officers. They are, president, Robert D. Flood, '96; vice-president, Henry W. Kern, '90 and secretary-treasurer, Robert W. Weeks, '13. It is quite evident that the Nominating Committee of George Bayard Jones, '05 and Company had a hankering for Bobs. With due regard to them it must be said that the Club is particularly fortunate in having as an officer, Henry Kern, '05, who did so much for the success of the musical club concert last December. Kern has already started in as the Technology representative on the Intercollegiate Committee for the Joint Alumni Outing.

This joint outing is to be given Saturday afternoon and evening, June 24, on the campus of the Northwestern University at Evanston. The previous outing, which was started last year by Technology, was such a success that it was decided this year to include more of the engineering colleges and schools. As a result the outing will be attended by alumni from Cornell, Michigan, Illinois, Purdue, Ohio, Wisconsin, Armour Technology, Northwestern and Technology. The Northwestern campus is an ideal place for just such an outing; located within easy access to Chicago, situated on the lake with plenty of available ground for several baseball games, a large number of tennis courts and last but not least with the Patton Gymnasium where there are ample locker facilities and a large swimming pool.

The Technology Club of Chicago appointed Howell Taylor, '14, as chairman of the dinner committee and thereby discovered a new poet, one who will make Flood, '96, hustle if he wants to land this year's prize at the Annual Dinner. Taylor's efforts were so well liked that the Joint Alumni Outing Committee used them on the broadcast which was sent to all of the several alumni in Chicago. Here it is:

Come wield a raucous racket
 And bat a busting ball
 Come see the ponds both Ike and Mich
 A circus great and small.
 Come laugh at fiery fat men
 While in old Mich they sprawl;
 Come tilt a trusting trickster
 And try to make him fall.
 Come roll a bowl on swellest sward —
 Good sport for short and tall —
 Come hurl a quivering quoit or two
 And then you've not done all,
 Just shell out two iron dollars
 In answer to this call
 And you'll be a real live college man
 Come you — come one — come all.

While it is doubtful if the stunts will surpass those at Nantasket George Jones of '05 fame is cooking up one which promises to be equally mystifying. Both Michigan and Cornell will be on deck with their latest.

Each week the Joint Alumni Outing Committee have been taking turns as guests of the several alumni clubs. It was quite a pleasure to have them with us for lunch. After it is all said and done most normal college students have about the same kind of good times and it is quite natural that as they grow older they still have the same idea of a bang-up-to-date-outing.

The news from Boston is still meager as regards a new president. We all hope that the committee may be able to speed up their work and announce a choice before fall. — *Robert W. Weeks, Secretary-Treasurer, 525 South Wells Street, Chicago, Ill.*

CLEVELAND — TECHNOLOGY CLUB OF NORTHERN OHIO. — A dinner meeting of the Technology Club of Northern Ohio was held at the University Club on Thursday evening, May 18, 1922. Dean Henry P. Talbot was the principal guest and speaker of the occasion. Prior to the Dean's talk the annual election of officers for the ensuing year was held, the result of which was as follows:

President, George E. Merryweather, II, '96; vice-president, Frank R. Walker, IV, '00; treasurer, Donald O. Dunn, IV, '16; secretary, Philip N. Cristal, I, '17; executive committee, Henry B. Dates, VI, '94; Max Hellman, VI, '96; Raymond H. Danforth, II, '98; Allen A. Gould, VI, '10; Arch M. Eicher, XI, '12; Charles B. Rowley, II, '12.

Doctor Talbot spoke of the recent changes in personnel of the instructing staff at the Institute during the past year. He also stated that, as yet, as far as he knew, no definite choice or choices had been made for the new president. He urgently requested the Club or any other alumni group to submit names, any or all of which being acceptable by the Executive Committee of the Corporation. The Dean's talk was of a general nature and acquainted the local alumni with present day

conditions at the Institute. While in Cleveland Dr. Talbot was the guest of his relative, Hon. Newton D. Baker, former Secretary of War.

The luncheon day of the Club has been changed from Fridays to Thursdays of each week. The meeting place, however, remains unchanged — the rooms of the Cleveland Engineering Society on the mezzanine floor of the Hotel Winton. — *Philip N. Cristal, Secretary, 700 Hanna Building, Cleveland, Ohio.*

DETROIT — DETROIT TECHNOLOGY ASSOCIATION. — We had a very good representation at the annual intercollegiate luncheon held here in Detroit, when there were several thousand college men got together for an annual noon luncheon, and then marched through the city with banners flying, to the ball park, and witnessed the famous Detroit ball team win another game.

We are not holding any regular noon luncheons through the summer time, and so far there have been no plans made for a summer outing, although we hope to have one probably late in the summer. — *O. M. Davis, Secretary, 800 Twenty-fifth Street, Detroit, Mich.*

HARTFORD — TECHNOLOGY CLUB OF HARTFORD. — The Hartford and New Haven County Technology clubs are now on an equal footing so far as baseball and golf are concerned. They played their annual baseball game in connection with their joint outing at the Boxwood, Old Lyme, Saturday, and the New Haven team won, 2 to 1, avenging its defeat by Hartford last year. The victory made the New Haven team the possessor for a year of the cup which the Hartford club donated and won last year.

But the jubilation of the New Haven men was short lived, for they later went down to defeat in a golf match and tennis tournament, Hartford winning the first, 6 to 1, and in the second, all the doubles and two out of the three singles. New Haven won the golf match last year. This year is the first time the clubs have played against each other in a tennis tournament. A cup is awarded to the winner of each event.

"Uncle" Eben Stevens, Class of '68, umpired the baseball game. The Hartford committee in charge of arrangements consisted of George L. Mylchreest and George W. Baker.

It was decided to hold tournaments between the two clubs in the winter in Hartford and possibly in New Haven. Among the events considered were bowling, billiards and pool. Thirty Hartford men and twenty-two New Haven men were present. — *George W. Baker, Secretary, Box 983, Hartford, Conn.*

INDIANAPOLIS — THE INDIANA ASSOCIATION OF M. I. T. has been quite active this spring. The regular April meeting was held April 21, at the University Club, Indianapolis. Mr. J. Lloyd Wayne, '96, who has charge of the radio department at L. S. Ayers Company, gave an interesting talk on wireless telephony. Mr. A. W. Wells, '05, was present, and Mr. T. P. Kelly, '18, who is located here with Lilly Varnish Company, was made a member of the Association.

Prof. Edward F. Miller visited Indiana and a special meeting in his honor was held at the University Club on May 5. We were all very interested in getting some first-hand information of Institute affairs. Professor Miller spoke on the recent developments at the Institute, and the various aspects of student life and activity. He also showed lantern slides of the new buildings and laboratories. On May 6, Professor Miller visited Purdue University. Professor Miller, Dean A. A. Potter of Purdue, (M. I. T., '03), Mr. William M. Taylor, '86, and the secretary, made the trip in Mr. Taylor's car. We had lunch at Dean Potter's home and spent most of the day going through the University. Purdue is beautifully located on the hill of West Lafayette, Indiana. The building and laboratory equipment are very good, and it is easy to see why this school ranks as one of the best engineering schools in the middle West.

The regular May meeting of the Indiana Association of M. I. T. was held on May 26. Dr. Walter W. Bonns, '99, gave an illustrated talk on Economic Diseases of Plants. On June 23, Prof. Dr. George de Bothezat was the guest of the Association. He gave an informal lecture on the fundamental conceptions of the Einstein theory of relativity. Dr. de Bothezat who is now located at McCook Field, Dayton, as a technical expert on aeronautics for the United States government, is very well known among aeronautical engineers for his theory of blade-screws. He has, however, done considerable work in other fields and is considered an authority on fluid dynamics.

The secretary has been attempting to get up a roster of all M. I. T. men in Indiana. So far the results can hardly be said to be successful. Letters with return cards were sent to every known Tech man in this State. About seventy letters were sent out. Of these, forty-one have not been heard from, eighteen have been reported as having left the State, and only nineteen names have been returned with addresses for listing. There are at present in the Association twenty-six active members, residents of Indianapolis and eight non-resident members. The Indianapolis men turn out in good numbers at every meeting.

The plans for the summer months are not definitely arranged yet, but a committee is working with the idea of having a picnic some time in the latter part of July. Mr. J. Lloyd Wayne, '96, Mr. Alexander R. Holliday, '99, and the secretary, comprise the committee, and at present it looks as if we will have our good time at Mr. Holliday's country place which is easily accessible by automobile.

Mr. H. V. Howes, '20, who is with the Bemis Brothers Bag Company, has been in Indianapolis this spring and attended our meetings. Mr. A. W. Wells, '05, and Mr. Cochran of Louisville (class not known) have been with us recently. — *E. M. McNally, Secretary, care Allison Engineering Co., Box 894, Indianapolis, Ind.*

JACKSONVILLE — TECHNOLOGY CLUB OF FLORIDA.—The alumni of the Massachusetts Institute of Technology in Florida, at an informal gathering on April 10, 1922, organized a new Tech Club at Jacksonville,

to be known as the Technology Club of Florida. The officers elected at the meeting were: president, Horatio N. Parker, '94, Jacksonville; vice-president, George W. Simons, Jr., '14, Jacksonville; secretary, Alexander Brest, '16, Gainesville; member of executive committee, Malcolm Bruce, '06, De Funiak Springs. The club consists at present of forty members and its purpose is to keep them in touch with matters relating to its Alma Mater and to supply information regarding the activities and progress of its members.

The club will welcome any additions to its membership and will be pleased to have all Tech men who visit Jacksonville meet with them at the informal luncheons which are held the fourth of every month at the Canton Restaurant, Jacksonville. Try to plan your visits to Jacksonville so that you will be able to meet with the other members. — *Alexander Brest, Secretary, University of Florida, Gainesville, Fla.*

NEW BEDFORD — TECHNOLOGY CLUB OF NEW BEDFORD.— On March 30 the annual dinner and the annual meeting of the Technology Club of New Bedford was held at the Wamsutta Club. Mr. Albert J. Browning spoke on the undergraduate activities. President Young was in the chair. Twenty-three men were present and after the dinner the annual meeting was held.

Mr. E. H. Wing was elected president, Mr. Dana J. Gillingham was elected member of the executive committee, and Mr. Philip E. Young was elected member of the Technology Council. — *Charles F. Wing, Jr., Secretary, 790 Purchase Street, New Bedford, Mass.*

NEW HAVEN — NEW HAVEN COUNTY TECHNOLOGY CLUB.— A very pleasant gathering of New Haven Technology men was held in the Clubhouse of the Winchester Repeating Arms Company on April 5, under the very able command of Col. W. H. Sage, Jr. The dinner was very informal and was attended by thirty-four members of the New Haven County Technology Club. After dinner, the members enjoyed the use of the club bowling alleys, shooting ranges and billiard tables. Those attending are as follows:

William H. Bassett, Jr., Major A. E. Bellis, Clifford B. Bellis, John C. Bradley, Kenneth Cartwright, A. R. Davis, Henry Dowst, Chester Dunlap, H. Gfroerer, J. S. Gravely, Charles R. Haynes, Herbert F. Jermain, Wesley T. Jones, Joseph Kaufman, Prof. Philip G. Laurson, W. H. Leathers, G. Vincent Maconi, F. G. Purington, John Putnam, C. J. Randall, R. H. Rich, Burr A. Robinson, Eugene W. Rutherford, T. W. Ryan, W. H. Sage, Jr., Herbert G. Shaw, Elmore F. Shuster, Frank G. Smith, Edgar W. Taft, R. R. Taylor, E. A. Teeson, W. H. Whitcomb, H. M. Wilcox and Dean F. Willey.

The regular monthly luncheon of the New Haven County Technology Club was held jointly with the local Dartmouth Club on Tuesday, May 23. This is the last luncheon until after the summer months. The Club has been especially successful with its luncheons during the past season. They have been well attended and interesting, and a

credit to the efforts of the Luncheon Committee, Messrs. Maconi, Gfroerer and Wells. About twenty to twenty-five men have usually attended on the third Tuesday of each month throughout the past year, and in particular three different talks — Boy Scouts by Carl Northrup; Rubber Manufacturing by W. H. Whitcomb and Radio Application to Long Distance Telephony by Charles Daley — have furnished added attractions.

The New Haven County Technology Club joins with the Hartford Technology Club in their annual summer outing at the seashore on Saturday, June 24, to be held at the Boxwood, Old Lyme, Connecticut. Again New Haven will bring home to the setting sun the trophies of a victorious day — cups, steins, lame muscles and sunburn.

The annual meeting for election of officers is scheduled to be held about the middle of July at the Country Club.

Cards are being received weekly from Chester Dunlap on his way through Europe selling Kolynos dental products. The last card indicates that he has reached Berlin where he is loyally drinking to the health of the New Haven County Technology Club in the best of "Munchner." He has just finished similar duties in Antwerp.

Announcement is made of the birth of Richard Curtiss Maconi, '40, on May 22, 1922. Richard's father is the Maconi famous for his monthly luncheons which have been so successful with the New Haven County Technology Club during the past year. Richard is already taking after his father. Congratulations, Mac!

The secretary has at last found the reason for Wesley Jones', '11, numerous absences. (This is on the quiet, and his class secretary must not find it out.) He now admits that he is planning his wedding for the early part of September to Miss Marion Lyon of Connecticut College. We extend our best wishes to Wesley and Miss Lyon for happiness and success. — *R. L. Parsell, Secretary, 235 Park Street, New Haven, Conn.*

NEW YORK — THE TECHNOLOGY CLUB OF NEW YORK. — The annual meeting of the Technology Club of New York was held on May 1 and the following officers and governors were elected for the year 1922-23: R. S. Allyn, '98, president; C. E. Lawrence, '96, C. W. Aiken, '91, T. H. Wiggin, '95, L. C. Hammond, '02, vice-presidents; F. E. Foss, '86, treasurer; A. L. Hamilton, '18, assistant treasurer; R. H. Scannell, '17, secretary; L. A. Ford, '89, L. D. Gardner, '98; W. D. Binger, '16, R. J. Marlow, '17, J. J. Strachan, '13, G. C. Gibbs, '00, E. P. Brooks, '17, T. D'A. Brophy, '16, W. T. Spalding, '10, governors.

One of the first acts of the Board of Governors was the appointment of Mr. Charles W. Gardner as manager of the Club. Recent striking improvements in Club facilities and service are due to the initiative of Mr. Gardner and the most active House Committee in recent years.

The Club Library has developed into something decidedly worth while and about three hundred of the best recent books have been donated by members of the Club with the result that the librarian has

boasted that he could satisfy every taste from the most depraved to the most fastidious. The very latest works of fiction, travel, biography, science, economics and finance may be found on the shelves.

For the benefit of Tech men in the 42d Street district who do not find the Technology Club convenient at noon, a luncheon is held the first Wednesday of every month in the Grill Room of the Hotel Lorraine, Fifth Avenue and 45th Street. A congenial crowd is always to be found there and non-club members are especially welcome.

In pursuance of its customary policy the Technology Club has extended an invitation to all members of the graduating class (1922) to become members of the Club without payment of dues for the remainder of the calendar year. At the present writing about one hundred men have accepted this invitation and it is sincerely hoped that every man of the Class of 1922 who expects at any time to be in New York will avail himself of this exceptional opportunity to meet his fellow alumni in New York and to enjoy the many advantages offered by the Technology Club at this time.

The popularity of the new billard room continues unabated. The pergola is particularly attractive and cool for outdoor dining during the summer season. The rooms and dormitories have lately been filled to capacity and it is suggested that Tech men wishing to stay at the Club while in New York write or wire to reserve accommodations. — *R. H. Scannell, Secretary.*

PHILADELPHIA — TECHNOLOGY CLUB OF PHILADELPHIA.— At our April meeting at the Engineers' Club, we had Mr. W. F. Van Riper of E. I. duPont Powder Company for our speaker. Mr. Van Riper presented a very interesting paper on the dye industry and illustrated it by films of the Deepwater Plant of the duPont Company.

Our annual election was held at the final meeting of the year, May 3, 1922, at the Engineers' Club, and the following officers were elected:

President, C. A. Anderson, '05; vice-president, E. M. Pace, Jr., '17; secretary and treasurer, Dexter A. Tutein, '17; executive officers: L. A. Miller, '01, George F. Rowell, '92, H. A. Goddard, '04, F. H. Rockett, '17.

These officers were elected to take office for the next year, which begins in September, 1922. At this meeting we also adopted a new constitution over which considerable work has been done during the past four or five months. At the close of the business meeting, P. E. Tillson, 1906, presented informally five reels covering the work of the Bell Telephone Company, three showing creating implements of speech and two showing maintenance of the highways of the Telephone Company.

The big day of the year came on June 10 when we had our Field Day and outing at the Frankford Country Club. Some seventy Tech men with their wives and children were present. The entire Clubhouse and grounds were ours for the day and one of the best caterers in the

city provided for our eats. It was well that the Club did not take out rain insurance as the weather could not have been better had we insured it to the very hilt. The day was started by base ball between Odd Classes and Even Classes. Contrary to last year the Even Classes came out on top. The Even Classes were captained by one of our oldest members, William C. Rogers of the Class of 1886. The ladies then had a centipede race, which was won by Miss Schwatt's team, the "Techlets" a peanut scramble, the result of which is still in doubt, and the three-legged race was won by Dayton Brown, '21, and partner. The block race for children was won by a Rowell Techlet. The base ball throw for women was won by Miss Sutphin. A new and novel event was introduced for the men this year. It consisted of the men running about thirty yards to a bunch of pipes and returning over the line with the pipe lighted. It was a very merry sight to see so many men scrambling on the ground for the pipes and it seemed like a Technique Rush. R. J. Tuller, '13, won the race. After showers, we all sat down to one of the best meals that had ever been provided for on Tech Field Day. After supper, D. K. Bullens, '09, with our old president, L. A. Miller, '01, our new president, C. A. Anderson, '05, E. G. Allen of '00, P. E. Tillson, '06, and several other of the men singers formed a group and led everybody in singing several of the Tech songs.

When the Clubhouse had been cleaned up from the dinner tables, etc., we enjoyed a dance until about ten o'clock in the evening. P. G. Woodward, '17, A. H. Kinghorn, '20, and Parry Keller of '15, gave a good account of themselves here.

Much of the credit for this successful Field Day is due to the committee headed by E. M. Pace, Jr., '17, who worked very hard to make it a go. Before we close this account of 1922 Tech Field Day, we must mention George T. Rowell, '92, who accounted for seven of the people present, including three Techlets.

The weekly luncheons for all Tech men in Philadelphia and vicinity will be held regularly during the summer at Wanamaker's Tea Room on the eighth floor on every Thursday at 12.30 P.M. Do not be bashful about coming to these dinners and meeting your old Tech friends.

In the fall monthly meetings will begin again in October. The secretary will be glad to receive the addresses of any Tech men in the vicinity of Philadelphia who are not listed.

The treasurer announced that Field Day was financially a loss and in the fall it will be necessary to start a campaign for dues as the treasury level is slipping a bit. — *Dexter A. Tutein, Secretary, Real Estate Trust Building, Philadelphia, Pa.*

PROVIDENCE — TECHNOLOGY CLUB OF RHODE ISLAND. — The monthly meetings of the club continue to prove highly satisfying and entertaining to the members. At our April meeting we repeated, by special request, the MacLeod intelligence test, patterned after the now famous ones of Thomas Edison, and although few of us would have been offered positions by the inventor as a result of our attempts, we

at least felt that the increase in knowledge was well worth the temporary mental strain. Much of the success of our meetings in the past year has been due to the untiring efforts of Norman D. MacLeod, '14, whose originality and enthusiasm have provided a series of gatherings that we have learned to look forward to with anticipation. Whether the party was a bridge "battle," or a scientific debate on the comparative deadly effects of the atom and the molecule, it promoted the general good feeling and increased our friendship with one another.

THE ANNUAL MEETING

TECH men to the number of about fifty gathered at the University Club on the night of May 19, for the annual meeting of the club. A well decorated table and an excellent cuisine, interspersed with community singing, served to prepare the members for the oratorical delights that followed. Dean Otis Randall of Brown University spoke on "The College Man and the World." He mentioned the urgent need today of technically trained men and their duties as college men. Prof. Edward F. Miller gave a brief synopsis of the recent changes at the Institute and the plans for the future. After the speeches the club listened to a lively jazz concert by F. D. Gage, '22, consisting of his Tech Show successes and those of other song writers.

The annual election of officers resulted in the following: president, Chester T. Morey, '11; vice-president, Morell Mackenzie, '11; secretary-treasurer, Norris G. Abbott, Jr., '20; member of alumni council, William C. Dart, '91; councilors, A. C. Dickerman, '05, and James I. Finnie, '09. — *Norris G. Abbott, Jr., Secretary, 107 Providence Street, Providence, R. I.*

ROCHESTER — THE TECHNOLOGY CLUB OF ROCHESTER. — The Rochester Club, in the last issue of the REVIEW, didn't attempt to prove, it simply confessed modestly that it had made a huge success of the winter program; but we want to re-state it in a little stronger terms now. We had no expectation at that time of a visit from Dr. Talbot, who dropped in upon us about apple-blossom season, and, at a gathering of the clans from '94 to '21, topped off the year's program by narrating the "Story of the Stute" in these latter days — all of which convinced us that the good Dean is, himself, somewhat of a "Latter Day Saint," though we know not if he is formally identified with the brethren of that persuasion and pledged to their tenets. Anyway, our Mr. Haste, '96, opened his eyes (the Dean's, of course) to the wonders of Kodak Park once more, until the Dean, in the course of his talk referring to some academic matter of a million dollars or so in prospect, declared that such an amount seemed to him quite a sizeable sum up to the time of his observations in Rochester today. Mr. Lovejoy, '94, entertained Dr. Talbot at luncheon at the Genesee Valley Club and during the afternoon we were able, despite that old obstructionist, Jupiter Pluvius, to show him, from the safe interior of a limousine, our Highland Park, closest competitor, they tell us, of the Arnold

Arboretum, which, being under the shadow of the Institute, quite naturally no one of us had ever seen. The lilacs were just then in full bloom, in honor, no doubt, of the occasion; but through some misapprehension they failed to bloom exclusively in silver grays and reds.

There was fourfold good news at the meeting that evening. Four is the lucky number in clovers and divers other things you must understand: 1. Dr. Talbot's address. 2. The attendance, for the first time in recorded history, of a lady at our meetings, namely, Mrs. Sarah Hall Bonesteel, of the Class of '94, who is managing a big farm at Victor, New York. 3. The announcement of the election to term membership in the Corporation of the Institute of our fellow member, Mr. Frank W. Lovejoy, '94, vice-president of the Eastman Kodak Company. 4. The plans made in connivance with the Dean for utilizing the several hundred dollar surplus accruing from the concert of the Musical Clubs given here last December; but then, 'nuff said, that's a secret for the present. — *G. T. Lane, Secretary, Eastman Kodak Co., Rochester, N. Y.*

SCHENECTADY — TECHNOLOGY CLUB OF EASTERN NEW YORK.— All Technology men in Schenectady have been greatly pleased by the recent appointments of two alumni to important positions with the General Electric Company.

Gerard Swope, '95, was elected president of the General Electric Company, succeeding E. W. Rice, Jr., who was appointed honorary chairman of the Board of Directors. Mr. Swope's record as vice-president of the Western Electric Company, as assistant to General Goethels during the war, and as president of the International General Electric Company is too well known to require extended comment here.

Karl A. Pauly, '96, has been appointed head of the power and mining department of the General Electric Company, succeeding D. B. Ruchmore, who has been appointed a consulting engineer. Mr. Pauly has been prominently identified with steel mill electrification work.

The Club will greatly miss Norman A. Lougee, '11, its present president, who has accepted a position with Stone & Webster in Boston. Mr. Lougee has been carrying on the engineering development of the aluminum cell lighting arrester for the General Electric Company for the past few years. Throughout his residence in Schenectady he has been an active participant in the Club's affairs.

C. N. Draper, '07, is one of Schenectady's alumni attending the Technology commencement festivities. — *Philip L. Alger, Secretary, 305 Rosa Road, Schenectady, N. Y.*

WASHINGTON SOCIETY OF M. I. T. — A Ladies' Night was held by the Society on May 2 at the University Club, with seventy-five persons present. Mme. Slavko Y. Grouitch, wife of the minister of the Serbs, Croats, and Slovenes, gave a most interesting talk on conditions in that country. Mrs. Logan Feland, wife of Brigadier-General Feland,

'92, of the United States Marines, sang several selections, after which a number of reels of moving pictures of Serbia were shown by Edward Stuart, '10, of the American Red Cross, who was also in charge of the evening's entertainment. Some excellent refreshments were then served. The first Ladies' Night held by the Society for several years was voted a very successful and pleasant function by all who attended.

The weekly lunches, which are held every Friday at the University Club have had as speakers some of the most prominent men in the national capital, as well as distinguished visitors from other parts of the country. On March 17 Professors G. C. Whipple, '89, of Harvard and W. Hovgaard of the Institute were present. General L. Feland, '92, told an interesting story of conditions in San Domingo the following week, while Dr. C. R. Mann, chairman of the Civilian Advisory Board of the War Department, was the speaker on March 31. Judge F. W. Booth of the United States Court of Claims delivered a stirring address to the Society on April 7 and Sidney F. Smith, '86, Examiner in Chief of the United States Patent Office, described the work of the government department on the fourteenth. Colonel Charles Kellar, Engineer Commissioner of the District of Columbia, was the guest of honor on April 21 and a special lunch was held for Prof. E. B. Wilson of the Institute on the twenty-fifth. O. C. Merrill, '05, was the orator on April 28 and gave those present an illuminating outline of the offer of Henry Ford for the Mussel Shoals plant. Mr. Merrill is secretary of the Federal Power Commission and most of those present stated that after hearing him they understood for the first time what all this Mussel Shoals business was about. Henry S. Dennison, president of the Dennison Manufacturing Company and Director of Welfare of the United States Post Office Department told the local alumni how to manage men in big industries, on May 5. The following week, E. W. James, '07, of the United States Bureau of Public Roads, outlined in a very interesting manner the Federal road plans. On May 19, Dr. Thomas E. Green described the proposed Washington Memorial Building, of the local campaign committee of which he is chairman. B. L. Johnson, '05, of the United States Geological Survey, related the work of his bureau on May 26 and Captain D. R. Simmers, '05, United States Navy, told the Society on June 2 what effect the Disarmament Conference would have on the battleship design of which he is in charge. H. M. Loomis, '97, of the National Canners Association explained on June 9 what a vitamine is and the effect of canning one and D. A. Tomlinson, '12, of Chicago narrated events of the Chicago alumni. We gathered from his witty remarks that Chicago Tech men are more or less on the job, but we know that they have nothing on Washington alumni. On June 16 the Washington Society of M. I. T. presented a picture of the Institute to the University Club, which was received on behalf of the club by P. L. Dougherty, '97, its secretary. Brig. Gen. H. M. Lord, Federal Director of the Budget is scheduled to speak on June 23, which is several days after this material is being prepared. The average attendance at the lunches has been twenty, which is an encouraging

number, but only eight-tenths of one per cent of the total number of Tech men in the city. The Tech contingent at the Navy Department, ably rounded up each week by Truscott, '07, is the standby of the lunches. The ten minute speeches have proven extremely interesting and instructive and those who "forget" to come around have missed out. One way to get a man at the lunches, however, is to invite him to speak and even if he never comes again (which, strange to say, sometimes happens) we have the pleasure and good fortune of having seen him once. During the summer the speeches will be discontinued, to be resumed with ever increasing success (we hope) in the fall.

A number of individual news items, without which this letter would be incomplete, occur to us. A. E. Hanson, '14, has been appointed superintendent of buildings at the United States Bureau of Standards; H. N. Calver, '14, former secretary of the Society, dashed out to Pittsburg in April and returned with Mrs. Calver and was thereby welcomed into the married circle. Edward Stuart, '10, has left Washington for New York, where he is to develop educational moving pictures. Mr. H. A. Baldwin, '94, has recently come to Congress as the representative from Hawaii. — *James A. Tobey, '15, Secretary, 411 Eighteenth Street, N. W., Washington, D. C.*

WORCESTER — TECHNOLOGY ASSOCIATION OF WORCESTER COUNTY. — At a meeting of the Worcester County Alumni the following officers were elected for the coming year: President, William M. Bassett, '02; Herbert W. Estabrook, '97, vice-president; Ernest P. Whitehead, '20, secretary. These with the following constitute the executive committee: Robert L. Fuller, '96; Carleton A. Read, '91 and Percy J. Colvin, '07.

We had a very successful meeting, forty-two Tech men being present. Everett Morss, '85, spoke on Technology finances and Donald F. Carpenter, '22, spoke on undergraduate activities. — *H. L. Robinson, Retiring Secretary.*

NEWS FROM THE CLASSES

1868

ROBERT H. RICHARDS, *Secretary*, 32 Elliot Street, Jamaica Plain, Mass.

The diagram on opposite page represents a stage in the bringing up of a nephew by Richards of '68, and his wife. As they have no children of their own, it is nothing more than right that they should assume a small share of the world's needs along this line.

The problem has been full of pleasure for them and of satisfaction so far attained through the help of the good Lord.

1871

E. W. ROLLINS, *Secretary*, Dover, N. H.

In the death of Henry M. Howe which occurred at his home at Bedford Hills, New York, the engineering profession and the scientific world loses one of its most brilliant and most honored members.

He was the only son of Dr. Samuel G. Howe and of Julia Ward Howe and was born at Boston on March 2, 1848. He graduated from Harvard College in 1869 and from the Massachusetts Institute of Technology in 1871. Returning to Harvard he received his A.M. degree in 1872. In 1874 he married Miss Fannie Gay of Troy, N. Y., who survives him. From 1883 to 1897 he was consulting metallurgist with office in Boston and lecturer in metallurgy at the Massachusetts Institute of Technology. In 1897 he became professor of metallurgy in Columbia University, a position which he occupied until 1913 when he was made professor emeritus.

The importance of his contributions to the art and science of metallurgy made him the recipient of many honors and distinctions, including honorary memberships in the Royal Swedish Academy of Sciences, the Russian Imperial Technical Society, the Russian Metallurgical Society, the American Iron and Steel Institute, fellowships in the National Academy of Sciences, the New York Academy of Sciences, the Washington Academy of Sciences, the American Academy of Arts and Sciences, the American Philosophical Society and the American Academy of Engineers. He was a chevalier of the French Legion of Honor and a knight of the order of the St. Stanislas of Russia. He was awarded the Bessemer gold medal by the Iron and Steel Institute of Great Britain, the John Fritz medal, the Eliot Cresson Medal by the Franklin Institute of Philadelphia and a gold medal by the French Society for the Advancement of National Industry. In 1905 both Harvard and LaFayette Universities conferred upon him the honorary degree of doctor of laws and in 1915 the University of Pittsburgh, the honorary degree of doctor of science.

His monumental work "The Metallurgy of Steel" published in 1890 was followed by many other books and by numerous contributions to the transactions of scientific societies and to the technical press.

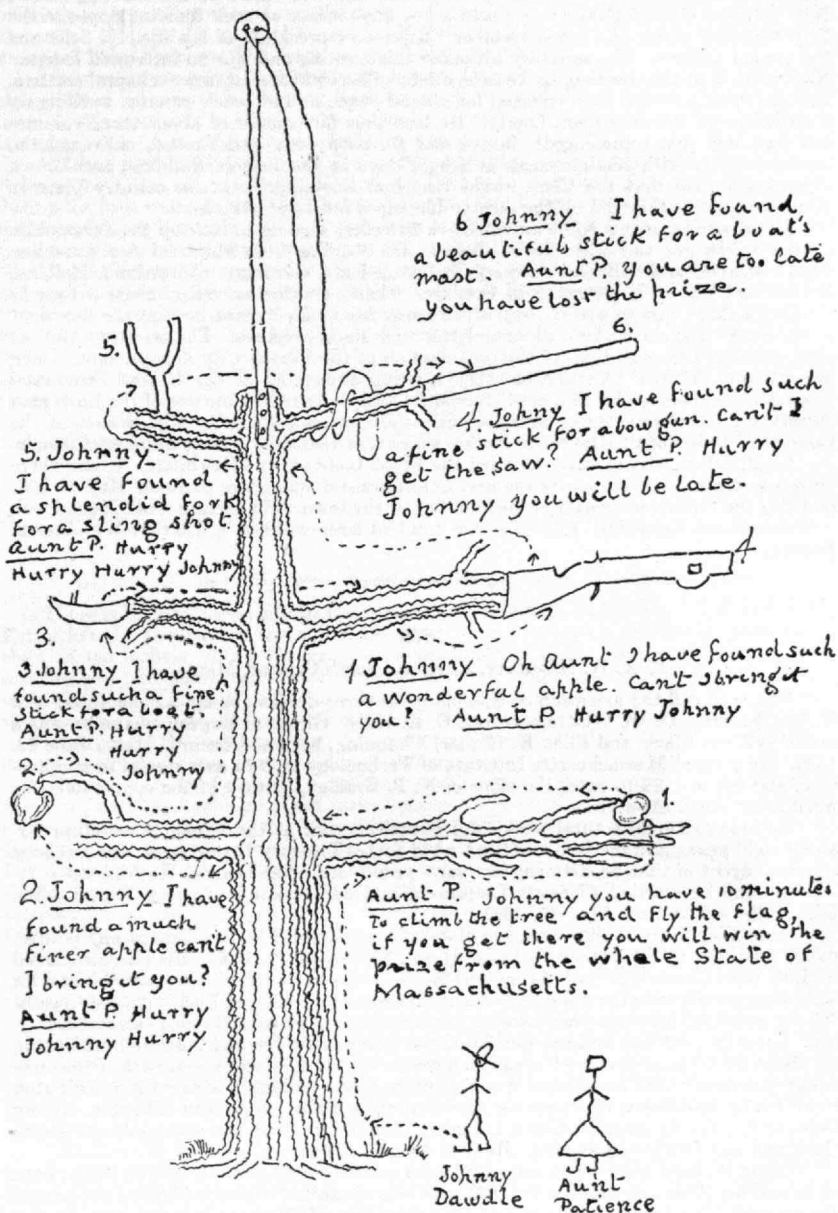
Professor Howe has contributed more than any other living metallurgist to the science of steel making and of steel treating.

He was a man of genius and of high ideals and admired and beloved by all who knew him.—*Boston Transcript*.

1874

GEORGE H. BARRUS, 12 Pemberton Square, Boston, Mass.

The Class lunch held at the City Club on June 2, 1922, was attended by Bouvé, Burrison, Brown, Barrus, Mansfield, Nickerson and Read. In the course of the luncheon,



"BRINGING UP A NEPHEW"

which was much enjoyed by those present, mention was made of the meeting of the New England Genealogical Society held a few days before at their building opposite the City Club, at which our fellow member Chase, now president of the society, delivered the annual address. The secretary attended this meeting and was an interested listener. Nickerson, in this connection, spoke to us briefly of his own interest in genealogical matters, and stated that he had been engaged for several years, and at much expense, working up a genealogy of the Nickerson family. He had thus far completed about three volumes and had only just commenced! Bouvé and Burrison, in a jovial mood, enlivened the luncheon party with reminiscences of school days in the Rogers Building, and Brown expressed a wish that the Class would visit him this summer at his country place in Hingham, just as they did on the memorable trip a few summers ago.

Russ, who is getting to be an extensive traveller, is going to look up the devastation caused by the war and other things abroad. He is sailing from Montreal on a Canadian Pacific steamer and will visit Antwerp, Belgium, Italy, Germany, Switzerland, Holland, France and England, returning in October. Chase, another traveller, made a tour to California three months ago by way of Panama, from which point he sent the president a post card. Stevens writes a pleasing letter with sincere regards. The secretary took an active part in the centennial of the organization of the Boston City Government, which occurred on Patriots' Day and on May 1, being a member of the Boston Centennial Committee, appointed by Mayors Peters and Curley. As representative of the Bostonian Society on the committee he arranged an exhibition of pictures of Old Boston in the Council Chamber of the Old State House, which was visited by a large number of people.

G. B. Elliot, who recently founded the Elliot Institute at Fitzwilliam, N. H., where he has a summer home, reports the first entertainment was given there on May 19 last, marking the 149th anniversary of the founding of the town. The lecture was "Monadnock — Beloved and Beautiful" with over one hundred lantern slides by Herbert W. Gleason, Boston.

1875

E. A. W. HAMMATT, *Secretary*, South Orleans, Mass.

I have to call the attention of classmates to three deaths among our members,— of G. E. Channing, O. W. Whittemore and E. R. Hills. Giovanni Eugene Channing was a son of William Ellery and Ellen K. (Fuller) Channing; born at Concord, Mass., June 23, 1853. He entered Massachusetts Institute of Technology in 1871 as a special in architecture, and left in 1872 to enter the office of N. P. Bradley, because of the opportunity for work after the Boston fire.

He followed architectural work, and botanical work at the Arnold Arboretum for about eight years, and then entered the United States Treasury Department, and has been a special agent of that department for many years, located at Seattle, Washington.

In 1880 he married Florence Thompson, and had two sons, George T. and John. His death occurred on June 23, 1921.

Omar Woodbury Whittemore, son of John Francis, and Ella L. (Richardson) Whittemore, was born at St. Anthony's Falls, Minn., September 30, 1854. His parents moved back to West Cambridge (now Arlington) Mass., when he was about six years old, and his early education was in the public schools of that town. He entered Tech with the Class of '75 but remained only one year, leaving to enter the drug store of David Dodge in Arlington. Later he went into business for himself, and carried on the drug business in Arlington for about thirty-three years. He was an assessor for twenty-three years, part of the time being chairman of the board, and was a member of the Arlington Men's Club, Arlington Boat Club, Middlesex Sportsman's Association, a Blue Lodge and Chapter Mason. October 7, 1877 he married Grace Langden Whittemore, and had two children, Helen Gertrude, and Marjorie Langden. He died May 7, 1922.

Edgar Richard Hills was a son of Richard and Elizabeth Newell (Gates) Hills; born at Brookline, Mass., September 16, 1855. He was connected with the Class as a special in chemistry during the fourth year; and with the Class of '76 during three years; leaving Tech in 1875 to enter the employ of L. P. Sharpless. He afterward was connected with the Walpole Color and Chemical Co., the Blue Hill Copper Mine, Blue Hill, Maine, chemist

at Providence, R. I., and at Bowker Fertilizer Works, Brighton, Mass., and finally entered business with his father as a watchmaker, following this business until his death. On December 27, 1877 he married Emma L. Bullard, and had a son Robert Edgar, and a daughter Ethel Frances. His death occurred May 19, 1922.

I have recently heard that classmate George Osgood, who never replies to letters or class notices, is living on his farm at Kensington, N. H., and I have once more tried to stir him up. My last letter to Phipps (the Parson) was returned unclaimed; so I fear something has happened. Any information would be appreciated.

William Cushing Edes, son of Richard S. and Mary (Cushing) Edes, was born at Bolton, Mass., January 14, 1856. He entered Tech with the Class of '75 and was with us during the four years, taking the Chemical Engineering Course. After graduation he was with the Census Bureau for a time; then with the Spring Valley Water Co. of San Francisco for about two years; next on location work for the S. P. R. R. in Arizona, New Mexico and Texas. On account of his health, he then came North, and for four years was engaged in general engineering work in the vicinity of Boston. For the next ten years he was assistant engineer on S. P. R. R. location and construction; then for five years chief assistant engineer, S. F. & S. J. Valley R. R., returning to the S. P. R. R. in location work in California, Oregon, Arizona, New Mexico and Texas. From 1906 to 1914 he was chief engineer of the N. W. P. R. R. and was appointed chairman of the Alaskan Engineering Commission by President Wilson — resigning about two years ago.

He married Mary Burnham January 31, 1901. According to the account given by the *Boston Transcript*, he died in a train near Merced, Cal., on May 26, 1922.

1880

GEORGE H. BARTON, *Secretary*, 89 Trowbridge Street, Cambridge, Mass.

There is little to report except the letter from Edward C. Potter which follows below. Potter left the Institute at the end of his junior year to accept a responsible position in the Chicago Rolling Mills. He was a very popular man in the Class and we were very sorry to lose him during our senior year. Not having graduated with the Class he seems to have been diffident about keeping in touch with his former mates, but the secretary would assure him that he has been missed all these years and his present letter is gratefully received by those who remain. The secretary hopes that other classmates will follow examples of Chase and Potter and send letters.

The secretary now plans to spend four weeks of his summer vacation in a trip that combines a study of geology in the various places visited with the usual pleasure of seeing places of interest. Leaving Boston on July 8, he will conduct a party to Niagara Falls, thence across Lake Ontario, make a brief stop in Toronto, thence pass down the St. Lawrence through the Thousand Islands, visit points of interest in Montreal, and in Quebec, make the round trip from Quebec up the Saguenay, thence by train to Metapedia at the head of the Baie de Chaleur. Thence the party will go by train to Gaspé and Percé Rock both of which are of extreme interest in both picturesque scenery and geological features. Returning to Metapedia the main line from Montreal to Halifax will be resumed. The famous "Bore" will be seen at Moncton, coal mines visited at The Joggins, famous mineral localities at Parrsboro, the Natural Park at Truro, and many things of historic and geologic interest at Halifax and vicinity. Leaving Halifax a visit will be made to the gypsum mines at Windsor, then some time will be spent in Wolfville, visiting Grand Pré, the Gaspereau Valley, and Cape Blomidon. At Annapolis Royal the old French Fort will be inspected and a walk taken over North Mountain. From Digby the party crosses to St. John where the Reversing Falls will be visited. Thence the return to Boston is by steamer.

"At last old '80 is waking up — actually showing signs of life! For lo these many years whenever the TECHNOLOGY REVIEW comes to hand I hastily turn to the 'News of the Classes,' only to be greeted by the usual blank between '79 and '81. But in the current number, received today, is a lovely letter from Chase together with a horrific tale of his sufferings in prehistoric Texas. I am wondering if he has told it all or if it is to be continued in our next. What a moving 'movie' it would make if he could get Bill Hart to do the

cow-boy! Do you wonder that I was stimulated to take my typewriter in hand and get into the running? Chase also makes mention of Hamilton and Miller. Where are these two worthies? Why do they not become vocal? 'Veal' Miller used to be very fluent in the use of the English language, especially in arguing with dear old 'Charlie' Cross on *a priori* grounds. I was not one of that noble band, that heroic eight, who stood unblenchingly before the Faculty and had a sheepskin pinned on them — or whatever it is they do with or to a sheepskin. Hence I have shrunk from rushing into print in an unseemly fashion while my superiors saw fit to remain mute. But I did a three-year stretch at the Stute, the marks of which remain with me to this day; and now that the silence has been broken by a *grad* I feel privileged and encouraged to let my pent-up soul break forth into speech and tell the world that I am still among those present — which is something the world has doubtless been greatly longing to hear. But for Heaven's sake why don't some of the other Sphinx's with the numerals '80 carved on their marble brows also exercise their vocal chords or their rusty pens? Business is not crowding them so hard at present that they cannot take a few minutes off and do a little 'glad-handing.' Of course, I realize that we are all octogenarians, or approximately so, but that is the season for reminiscence, and reminiscence is my dish!

Now, my dear Barton, I have not seen you since I bade you farewell at the end of the school year in 1879. You would not now recognize me from the Class photographs taken that spring. I have changed quite a little! I remember you as the youth who knew more about fossils than the man who invented them — and you actually knew what the word paleontology meant and could spell it, too! I don't wonder you got a degree! And it is fifteen years ago that my son came home from Tech with his brain crammed with knowledge and his eyes strained looking for a job! It is thus I realize what an antique I am! And here I sit, in the evening of my life, vainly looking through the 'News of the Classes' for something from '80. Stir 'em up, my dear Barton, stir 'em up!

Fraternally yours,

EDWARD C. POTTER.

1881

FRANK H. BRIGGS, *Secretary*, Hotel Puritan, Boston, Mass.

About five years ago, Harry Cutler sold out his interest in the Cutler-Hammer Manufacturing Co., Milwaukee, came back to Boston, and retired from active business. He could not stand the strain of doing nothing, and has again entered business life, particularly in the line of manufacturer of automotive products, on which he has been working, more or less, during the last five years. His first development is the Cutler piston, which is a medium weight gray iron piston, and is pushing this, and the Butler tappet for Fords, which is an advance over the usual Ford tappet in increasing the mileage from gasoline. He is making a specialty of pistons for passenger cars and trucks.

Prof. William B. Lindsey died in New York on May 6. He was a graduate of this Class, and from 1885 to 1910 was Professor of Chemistry at Carlisle, Penn. He retired under the Carnegie Foundation in 1910, and since then spent his time between Swan's Island, Maine and New York City. About three or four years ago, he "fell among thieves," and practically all of his savings were absorbed by a "bad man" in the New York investment market. This broke him down completely, and for the last year or two, he has been practically an invalid. His death occurred at his home in New York.

E. R. Warren writes from Colorado Springs, Colo., as follows: "You will possibly remember that I went to Los Angeles in the spring of 1921. I spent most of May and all of June there on business. The latter part of May I received a letter from Dr. Charles C. Adams, Director of the Roosevelt Wild Life Forest Experiment Station, New York State College of Forestry, asking if I would go to the Yellowstone National Park and spend the summer studying the beaver there. I returned to my home in Colorado Springs the first of July, remained just long enough to gather up my outfit and pulled out for the Park.

A word as to the organization under which I was working. The Roosevelt Wild Life Forest Experiment Station was established at the New York State College of Forestry as a memorial to Theodore Roosevelt. It is devoted to the study of wild life in all its phases,



MEMBERS OF CLASS OF '82 AT FORTIETH REUNION — June 16, 1922

Back row, left to right: H. F. Ross, Jenkins, Faunce, Herrick, Chapman. Second row, left to right: Brackett, Hall, Cheney. Front row, left to right: Walker, Jones, Snow, Gooding, Wardwell.

and these are very largely connected in some way with forests. The general scheme for such a station had been presented to Colonel Roosevelt some time before his death and met with his hearty approval and he had even done some work to further it, but we got into the war and the matter was dropped temporarily. After his death it was revived as a memorial to him and his great interest in wild life, and received the approval and support of his family.

Although connected with the New York State College of Forestry the station is authorized to do work outside the State of New York if funds are secured for the purpose, and that is how it happened that work was done in the Yellowstone. Besides my work on the beaver Dr. R. A. Muttowski of the University of Idaho was studying the food of the trout, Dr. Gilbert Smith of the University of Wisconsin worked on the algæ, and Edmund Heller, who had been with Roosevelt in Africa, was studying the big game.

How did I happen to have the work offered me? Well, as long ago as 1902 I made surveys and studies of beaver work near Crested Butte, Colo., the results of which were published three years later by the Washington Academy of Science. I made my headquarters at Camp Roosevelt and all of my work was done in the vicinity of the camp, which is one of those operated by the Yellowstone Park Camps Co., which was generously assisting in the work. The Camp is not one of the show places of the Park, that is, there are no geysers and 'sich,' but it is a mighty good place to stay, loaf, tramp, ride horse-back, or fish, just as you like. I spent about two months there studying several groups of beaver work, each of which had its own individual characteristics, mapping them, taking many photographs, and getting all the information I could as to the habits and lives of the animals. One of the places was but a few minutes walk from the camp and the animals could always be seen in the evening and often in the daytime, so that I was exceptionally well located for my work.

Since my return I have written two reports, a short one of a popular nature, and a much longer detailed report with maps as well as illustrations. I think these will be published this summer. I am anticipating the pleasure of going again this summer to go on with the work and make further investigations."

1882

WALTER B. SNOW, *Secretary*, 60 High Street, Boston, Mass.

On Friday, June 16, the Class celebrated the fortieth anniversary of its graduation. At 12.30 p.m. thirteen members lunched together at the Engineers Club, Boston, whence they rode by autos to the Institute, where the first stop was made at the Walker Building and three members of the first Board of *The Tech* (A. W. Walker, the first editor-in-chief; H. F. Ross and W. B. Snow) called at *The Tech* office.

The Class was photographed on the Institute steps and then traversed several of the buildings and visited the General Library. Leaving by auto, the members rode to the historic Wayside Inn at South Sudbury where the following members (fourteen in number) sat down to dinner at 6.30 p. m., — Brackett, Chapman, Cheney, Faunce, French, Gooding, Hall, Herrick, Jenkins, Jones, H. F. Ross, W. B. Snow, A. W. Walker, Wardwell. European travel unfortunately interfered with the reunion, for Lewis was obliged to be in New York to see off his children while Munroe sailed the next day with his family. A slight accident prevented J. H. Ross from being present as he had intended. Votes of sympathy were extended to Darrow, who was detained by the serious illness of his wife, and to Hersey, whose interest in the Class has been constantly maintained notwithstanding his confinement by many years of ill health. This was the first occasion on which Chapman (who for years lived in Wyoming) and Jones (who came on from Minneapolis) have been able to meet with the Class. Faunce came on from Carnegie, Pa., Cheney from South Manchester, Conn., and Wardwell from East Orange, N. J. Fred E. Hill now of Washington, D. C., at one time connected with the Class in the special architectural course had also expected to be present. Wardwell, who left the Institute at the end of his freshman year with the Class and had scarcely seen a member since 1879, was elected to regular membership.

It was decided that the 1923 reunion should be held on the day of the alumni dinner

the members to meet at luncheon on that day and as many as possible to attend the dinner in the evening.

1883

HARVEY S. CHASE, *Secretary*, 84 State Street, Boston, Mass.

The secretary is auditing the accounts of the City of St. Petersburg, Florida. His feelings regarding this section of Florida are expressed in the following eulogium!

ST. PETERSBURG, FLORIDA

St. Petersburg. The Burg of St. Peter. The City of the Saints! The Holy City. Paradise. Not "Pair-er-dice," which might fittingly be applied to certain cities of Florida, which shall be nameless, but Paradise-on-Earth, as real as you and I are likely to find it. Some of its Paradisical perfections are these: Its climate, deliciously warm without being enervating; its perpetual sunshine with constant variety of clouds and breezes; the softly lapping, equable waters of the Gulf and the great Tampa Bay, which enclose it on three sides. Its cheerfulness, cleanliness and charm. The marvelous music of the mocking birds. The tropic trees and the lustrous foliage. The flowers everywhere. Bouquets of pink oleanders as big as a Rolls-Royce garage. Flaming hibiscus, following the sun. Star patterned poinsettia, royal purple bougainvillea and ponciana, yellow floods of alamada trailing over railings and porches, jasmine, roses, petunias, cactus and century plants.

Then the "eats" as the inhabitants of this Paradise term them! Fresh vegetables in February, peas, potatoes, beans and asparagus. Strawberries, cherries, mulberries, guavas, loquats, highquats, kumquats and goquats! Pawpaws, pecans, avacados and mangoes; to say nothing of hundreds of acres of oranges, grapefruits, tangerines, mandarins and "Leonardis."

St. Petersburg has another unique distinction. It is not overrun with the malevolent young! There is a chance here for maturity, the fathers and mothers, even the grandfathers and the grandmothers, can disport themselves with freedom and happiness. They fish, pitch horse shoes — "slam the slippers" as the saints express it — double themselves down to the roque shots, listen by thousands to the Highlanders' band, (with "Ladies-from-Hell" costumes) Bowl-on-the-marl, golf at "Coffee-Pot" or Davista, run in their "Lincoln juniors" over miles and miles of bricked roads, swim in the sea or the "Spa," park their cars on "Central," or sit on the multitudinous benches and talk their teeth out!

Truly a Paradise for the middle aged. Few romping, roaring, reckless kids or vamping flappers, but in place of all that there is a sense of fraternity, kindness, thoughtfulness for others, amiability, coupled with a certain guilelessness and garrulity that are particularly fetching! Truly a Paradise is our beloved St. Pete.

By one who has recovered his health here.

Also "limericks" as follows:

St. Petersburg is not "effete"
Tho' the people all come from "Main Street"
They sit on the benches,
The men and the wenches,
And chin, chin, and chin in St. Pete.

In the Park they pitch quoits and play roque
Which the other towns claim is a joke,
But the Sunshiners say
They've more fun in their play,
Than those towns that look sour and croak.

They sell the town lots with a boom
And they charge forty dollars a room,
While you eat at superior,
Swell, cafeteria
With a band to dispel every gloom.

The ladies who bathe in the sea
 On the white shining sands at Saint P.
 Do insist on their rights
 To wear nothing but tights
 And the tights are as tight as can be!!

St. Petersburg "bowls-on-the-green,"
 Tho' there ain't any GREEN to be seen
 But they play, on the clay,
 In a way, every day,
 With remarks not profane nor obscene!

At the "Coffee Pot" golf course we boiled
 While many a good shot was spoiled.
 If you happen to slice
 In the rough, there's a nice
 Little seven foot rattle snake coiled.

If we drive from the tee at the Lake
 And happen to make a mistake,
 Knock the ball in the water,
 The "Gator" has got her,
 Or might be a moccasin snake.

We've a cute little bird called "The Mocking"
 Who can do almost all but the talking.
 He can whistle and trill
 And can sing with good will
 Just the same when he's flying or walking.

He sings and he swings and he sings —
 The mocking bird here in the Springs,
 His joy he must peal it,
 He cannot conceal it,
 So heartfelt the message he brings.

St. Petersburg sure has some spiders!
 The biggest of house's insiders!
 They straddle their legs,
 Over saucers of eggs,
 And then smile, like most peaceful bestriders.

St. Pete, no sleet, flowers sweet, brick street, lawns neat, fresh meat, friends greet, sun's
 heat, cow's teat, can't be beat, St. Pete.

1887

EDWARD G. THOMAS, *Secretary*, Toledo Scale Co., Toledo, Ohio

The Hotel Griswold at Eastern Point, New London, opened its hospitable doors for its summer season on Saturday, June 17, to welcome among its first guests the Class of '87 gathered for its thirty-fifth anniversary. Draper was first to arrive and officiated as reception committee for the rest of the men who rapidly came by automobile and train, including Giles Taintor, who left Boston at one o'clock and by sheer reckless driving of his new Nash reached the hotel at eight o'clock. Long distance records were held by Sturges and Schmidt from Chicago, Granger Whitney from Williamsburg, Michigan, Patterson from Ann Arbor and the secretary from Toledo, while the short distance trophy was captured by Frank C. Nichols, who lives right in New London and did not come at

all. Our party was not all men, for we had the pleasure of again meeting Mrs. Cameron, Mrs. Bryant, Mrs. Barton, Mrs. Lane and Mrs. Carter, while Barton also produced a sturdy twelve-year-old boy, who he said was his second size.

On Saturday night there had arrived Adams, Bowles, Douglas, Cushing, Crosby, Draper, Sears, Cameron, Proctor, Carter, Barton, Patterson, G. Whitney, Sturges, Schmidt, Richardson, Lane, Taintor, Goss and E. G. Thomas. The hotel gave us a big room to ourselves where we spent the evening in renewing our acquaintance with one another and in making the acquaintance of "Blue Dog" a very interesting game involving frequent financial transactions and employing many ground rules invented by George Draper. H. D. Sears rather excelled in this game and in African golf.

Sunday morning brought a very heavy rain and all the day was dull overhead, but a number of us played golf on the attractive links of the Shenecosset Club. Proctor seems to know the game and made a ninety on one of his rounds, but the rest of us wanted more exercise than this and used from one hundred and ten to one hundred and fifty strokes per eighteen holes. Then, being really hungry for golf, Patterson and Crosby illustrated the pep and stamina of '87 men by playing fifty-four holes in all and, by George, they were pretty fresh at that when they came in. During the day Bryant and Mrs. Bryant arrived and W. C. Cushing making the total attendance twenty-two.

Taintor had arranged for a sailing party in the afternoon, but many of us thought, after inspection of the boat and the weather, that the wheel base of the craft was too short to ride easily over a road that was sort of "under repair" and then the hotel food was rather expensive — well you can see how it was that the sailing party was small — just Taintor, Commodore Very, Sears, Goss and Charlie Barton's small boy for a mascot. In the evening we had an informal business meeting at which the treasurer reported that a number of generous donations to the Class treasury had raised his balance to \$175 — the reunion bills being yet to be paid. We had a story or two, a poem by Granger Whitney and then sang the following song by our apple-raising poet to the music of the Stein Song. It's good. Try it.

'87 TECH SONG

BY GRANGER WHITNEY

Forefathers, great, before us
 Showed life was worth the fight.
 For the great Bay State that bore us
 We will strive with zeal and might;
 As strong men and true men,
 We'll gather the strength to do when
 The time comes for action to a nation in its right.

For we left the halls of Rogers
 And have sought the river's side,
 That the great white halls of learning
 Send a welcome far and wide;
 To strong men and true men,
 To give them the strength to do when
 The time comes for action in a nation far and wide.

We will seek the river's waters,
 To strive for prize and fame;
 At track and field or quarters
 We will squarely play the game
 As strong men and true men
 We'll gather the strength to do when
 The time comes for action and a nation plays the game.

And in mine or mill or factory
 Where the sands of life are run;
 The prize that we will strive for
 Is a piece of work well done;
 By strong men and true men

Who gathered the strength to do when
The time comes for action, and the work must be well done.

We will seal the bonds of friendship
That will last from year to year,
And we'll often meet in kinship
The great white school to cheer;
As strong men and true men
Who gathered the strength to do when
The time comes for action in a nation ever dear.

My contribution to our entertainment was a demonstration that it has been absolutely unnecessary to change the contour of one's figure with advancing years, which I proved by wearing *buttoned up* and with comfort the drill jacket and cap I wore in the '87 Battalion in 1883. We wound up the evening with our usual magic lantern exhibition of pictures of Tech days and our reunions at Misery Island, Magnolia, Chebacco, Bass Rocks and Duxbury.

Nearly all stayed through Monday and played more golf or investigated the attractive country around New London, then we parted with a strong hope to meet again in 1927.

1888

WILLIAM G. SNOW, *Secretary*, 112 Water Street, Boston

The secretary regrets to report the death of George Lincoln Heath at the Houghton, Michigan, hospital on May 27 last, following a two-weeks illness with pneumonia. After graduating in Course V, he was assistant instructor in sanitary chemistry at Technology for two years until 1890, serving also as water analyst, Massachusetts State Board of Health, during the summers of 1898 and 1899. He removed to Brooklyn, New York, in the spring of 1890 and served six months as assistant chemist for the New York Tarter Company. In 1908 he was chemist and metallurgist, Calumet & Hecla Smelting Works, and Calumet & Hecla Mining Co., South Lake, Linden, Michigan.

Numerous articles by Heath have been published on the analysis of copper, etc., in the following journals: *Journal of the American Chemical Society*, *Trans. American Institute of Mining Engineers*, *Trans. Lake Superior Mining Institute*, *Engineering and Mining Journal*.

In 1918 Heath was chief chemist and technical metallurgist at the Calumet & Hecla Smelting Works. He was a member of the American Institute of Mining Engineers American Society of Testing Materials, Member of Committee on Non-Ferrous Alloys, American Chemical Society. Since last September he was connected with the chemistry division of the Michigan College of Mines.

Heath married Carrie A. Shepard on November 5, 1891. He is survived by his widow, a son, Gardner Shepard, his mother, Mrs. George H. Heath of Brookline, Mass., and a sister, Miss Ethel J. Heath, of the same place. For many years he resided in Hubbell, Michigan.

The *Christian Science Monitor* of April 21 stated that Henry Forbes Bigelow of 142 Chestnut Street, Boston, has been appointed by Mayor Curley to be one of Boston's art commissioners. Mr. Bigelow's appointment meets with approval for Mr. Bigelow is an architect with years of experience in Boston. At City Hall it is said he will prove a valuable commissioner, as he is interested in just those subjects with which the Boston Art Commission deals. No salary attaches to the position. Mr. Bigelow, who is a native of Clinton, Mass., was graduated from Massachusetts Institute of Technology in 1888, receiving the degree of bachelor of science in architecture. He is a member of the firm of Bigelow & Wadsworth of this city. He has drawn plans for St. Mark's School, Southboro, Mass., the Shawmut Bank Building, the Tremont Building and the Hotel Touraine, and the residences of Robert Saltonstall in Milton, Mass., and James J. Storrow in Lincoln, Mass. He is a member of the Tavern and the Somerset clubs."

Friends and associates of W. G. Besler, president of the Central Railroad of New

Jersey, gave a dinner in his honor at the Biltmore a short time ago to celebrate the twentieth anniversary of his connection with that railroad. After leaving the Institute he became a trainmaster's clerk on the Burlington, rose to the superintendency of a division, went to the Reading in a similar capacity and was later advanced to the presidency of the Central.

The annual reunion and dinner of the Class took place on April 26 at the Engineers' Club, Boston, preceded by golf at the Chestnut Hill Club, of which Baldwin is treasurer. A pleasant evening was spent and it was decided to celebrate the thirty-fifth anniversary of our graduation by a reunion to be held at Duxbury, Mass., on June 29 and 30 and July 1, 1923.

During a recent trip to the Pacific Coast Buttolph made a pleasant call on Frank M. Ladd, who is superintendent of buildings, Denver, Colorado, and saw Russell Clement in San Francisco. Clement's oldest son, Lewis, graduated from the University of California in 1914. He has made over two hundred fifty ascents in aeroplanes in the development of radio, besides spending several summer vacations on coasting vessels between San Francisco and Alaska studying the same subject. He is now right-hand man for Mr. Slaughter of the Western Electric Company (New York office), who is one of the leading spirits in the company's radio department.

The *Boston Evening Transcript* of June 17 states that Edwin S. Webster, who was accompanied by Mrs. Webster and his two daughters Frances and Polly, had just returned to Boston after a five-months trip to China and Japan. Stone & Webster are planning to build a two hundred fifty foot dam in northern Japan. In the interview Webster stated:

"My first objective was Aoshima, a small village in the northern part of Japan, on the Sho River. Here Stone & Webster are planning to build a two hundred fifty foot dam, as part of a hydro-electric project. Negotiations for this are still under way with the local officials, although we hope that it will not be long before we are able to begin the actual work of construction. There are considerable opportunities for hydro-electric construction in Japan, and our firm will probably confine its work in Japan to this line. The Japanese, although very adaptable, have not yet been able to train and turn out experienced hydro-electric engineers, and for this reason Americans will have for some time to come an opportunity to do work of this kind in Japan. Each water power problem is an individual one, and there is no standard plan that will cover each case. Hence the hydro-electric engineer will be needed in Japan for many years to come. I was particularly impressed with the extent to which the Japanese have made use of their natural water power facilities. Nearly every village has its own electric light, and even isolated houses have one or two electric lights, with current obtained from some small stream or tiny waterfall. Nature has made it possible for the Japanese to obtain water power cheaply and without difficulty, and they seem to have taken full advantage of the facilities with which nature has thus endowed the country. In Tokio, the electric light company has upwards of half a million customers — an excellent illustration of the progressive spirit of present-day Japan. Electricity is also being used to an increasingly greater extent in transportation, and several interurban electric lines are already in operation, notably the line between Tokio and Yokohama.

"To my mind, China offers even greater potential opportunities to Americans than Japan. China today is an undeveloped nation of nearly four hundred million people, and has just reached the point where her development should begin in earnest. Transportation is China's great need, as it is the need of every nation that would keep abreast of the times — and here Americans have a splendid opportunity. China needs transportation facilities of all kinds and she can now choose the particular kind of transportation best adapted for each particular section of the country, and each individual city. In the era when most of the railroads of the United States were built the railroad was the only type of transportation available, and as a result many spur line railroads are operated at a loss. China, however, can use the motor truck, the trolley car, the airplane, and the canal and the river, if any section of the country should be found which could not support a railroad at the present time. Here lies the opportunity for Americans, an opportunity to take the leadership in supplying China with transportation of varying kinds. In this connection it is interesting to note that a motor truck, used in the Gobi Desert, paid for itself in one round trip. I also understand that airplane lines are being planned to connect several of the principal cities of China."

Webster's trip was not entirely devoid of thrilling and unusual incidents, such as ordinarily do not fall in the itinerary of most tourists to the Far East. His party survived without mishap one of the severest earthquakes that has occurred in Japan within recent years. A more disastrous experience was the fire in the Imperial Hotel at Tokio, the famous hotel near Hibiya Park which has sheltered thousands of foreign visitors to the capital of the Mikado's empire. Fire destroyed the Imperial Hotel early this spring, and although Webster and his party were not in the hotel at the time, they nevertheless lost virtually all of their personal effects.

1889

WALTER H. KILHAM, *Secretary*, 9 Park Street, Boston, Mass.

Beals was installed as pastor of the South Main Street Congregational Church, Manchester, N. H., on June 6 and 7. During the ceremonies a greeting from the Class of '89 was extended in person by E. R. Conant who is now city surveyor of the City of Manchester, and by mail and telegram by the president and secretary.

Orrok presented a paper entitled, "The Development of Power" at the Brooklyn Engineers Club on April 13.

Pike is a member of the executive committee of the Sesqui-Centennial Committee of the Engineers Club of Philadelphia, and the secretary is indebted to him for a copy of the handsomely illustrated and very complete report of this committee on "Sites for the Forthcoming Exposition."

1890

GEORGE L. GILMORE, *Secretary*, Lexington, Mass.

We regret to report the death of Samuel L. Hadley, who passed away at his home in Chicago early in May. Sam was with our Class for two or three years, and will probably be remembered by the men of Course VI.

John Dearborn, who was with the Class the freshman year, was married to Miss Adelina Louise Toel in the Church of the Incarnation, New York City, on March 30. Mr. Dearborn is president of the Warren Brothers Company of Boston, and at one time was in the brokerage business on State Street, and lately has made his home at one of the Back Bay hotels. Mr. Dearborn and his bride will probably remain away on a prolonged trip before taking up their permanent residence in Boston.

Schuyler Hazard, Jr., son of our classmate Schuyler Hazard, of Albion, N. Y., in May was elected vice-president of the Class of '23, M. I. T.

Your secretary and Mrs. Gilmore left on May 29 for California on a special train, to attend the Rotary Convention at Los Angeles. There were about two hundred and twenty-five ladies and gentlemen going from New England. Stops will be made on the way out at the Grand Canyon and Pasadena. After a week at Los Angeles, a trip is to be made to the Mexican Border and then will continue on the train and go north to San Francisco, Portland, Seattle — then to Vancouver, where stops will be made at Lake Louise and Banff Springs; returning by the Canadian Rockies and arriving home July 1.

Arthur Roberts Wilson, a graduate from Course I, is one of the most prominent citizens of Watsonville, Calif. Mr. Wilson bought a quarry in that city some years ago and organized the Granite Rock Company of which he is at present the vice-president and general manager. His firm has been in charge of many important construction projects.

Having been born in San Francisco he has had intimate acquaintance with the water and has made yachting his hobby. He is a member of the Corinthian Yacht Club of Tiburon, the Elks, and the Watsonville Parlor of the Native Sons. His services on the local committee to secure members for the chamber of commerce were of recognized merit. At present his son, A. J. Wilson, '23, is attending the Institute.

Prof. William Z. Ripley, authority on railroad transportation, writing in *The North*

American Review on a constructive program for the railroads, holds that: (1) there should be no tampering with the Transportation Act which, in his opinion, provides a great advance toward a sound railroad policy; (2) the United States Railroad Labor Board should not be abolished or fused with the Interstate Commerce Commission, but the method of selection of the labor board's members should be modified and its powers strengthened; (3) the question of the consolidation of railroads should be given further study so that feasible and economic amalgamations may be worked out and consummated; and (4) the railroad bondholders should be given a voice in railroad management.

Mrs. James B. Seager of 355 Palmetto Drive, Pasadena, California, received word of the death of her husband, James B. Seager in New York City on April 23 following a brief illness. Besides Mrs. Seager, he is survived by two daughters, Mrs. Charles B. Barlow of Wisconsin, Mrs. Stella Seager Stearns of New York; also three brothers, Schuler Seager of South Hill Avenue, Pasadena; Dr. Henry Rogers Seager of Columbia University and Richard Seager of the Island of Crete.

Mr. Seager was a mining engineer by profession, having graduated from the State Mining School of Michigan and taken a post-graduate course at the Massachusetts Institute of Technology.

Mr. Seager was with the Class for two years, and will probably be remembered by many of our members as being present with us at one of the last big reunions.

Wallace MacGregor's address is now 734 Sankafael Avenue, Berkeley, Cal.—Joseph B. Baker, Fox Hills, Staten Island, N. Y.

1891

HENRY A. FISKE, *Secretary*, 275 West Exchange Street, Providence, R. I.

The Class of '91 has entered the four year competition for the Alma Mater Song with a vengeance by carrying off the first year prize. This stunt was accomplished by Arthur E. Hatch and the song entitled "M. I. T." was rendered for the first time at Symphony Hall Pops on Wednesday evening, June 7, by the Technology chorus directed by Mr. Stephen S. Townsend, accompanied by orchestra and organ; the secretary understands from some of those present that it was a success. Mr. and Mrs. Hatch claim that for an indoor hobby you can obtain a great deal of enjoyment from song building. This they discovered back in 1917 at the time of the Tech Jubilee when they entered the musical competition. Since then they have produced and published a number of songs. Mr. Hatch thinks song building resembles in many ways an architectural job as the first step is to get an original idea for the subject at hand, around which the framing of words is a simple matter; then comes the second step of producing an original melody to fit the words, after which an unlimited amount of time and thought can be put to advantage in polishing and finishing off the structure.

The secretary understands that a prize is to be given each year for the best song and then a vote will be taken as to which of the prize songs will be adopted as the M. I. T. Song. Why not other '91 men get busy and keep this competition in our own hands?

It was suggested that a Class Outing be held the last Saturday and Sunday in May, but this turned out to be an unfortunate date and it was called off. Arthur Hatch and Will Palmer refused to accept this edict and Will and Mrs. Palmer motored to Barrington on a week end visit to Arthur Hatch. An informal luncheon was held at the Rhode Island Country Club, at which Mr. and Mrs. Palmer, Mr. and Mrs. Hatch and the secretary and his wife endeavored to hold up the traditions of the Class of '91. We tried to make up in enthusiasm what we lacked in numbers.

Four members of the Class of '91 attended the annual outing of the Phi Beta Epsilon Fraternity at the Hotel Moreland, Bass Rocks, Gloucester, Massachusetts, from June 9 to 11; Charlie Aiken, Walter Hopton, Giff Thompson and Henry Fiske.

European trips seem to be popular this year. George Vaillant is spending the summer in Europe on an automobile trip with friends. Henry Fiske and family are taking a summer trip to England and the continent. William Channing Brown left for a trip to the other side on May 27. Probably others are going and it has been suggested that we might hold a '91 reunion in Paris. All those who are interested please write the secretary at once.



THE CLASS OF '92, WIANNO CLUB, JUNE 11, 1922
(President Carlson of the Alumni Association holding the straw hat)

Jimmy Swan is now in Washington with the United States Shipping Board Emergency Fleet Corporation doing appraisal work.

1892

JOHN W. HALL, *Secretary*, 8 Hillside Terrace, Roxbury, Mass.

The thirtieth reunion was held as planned at the Wianno Club, June 9-11, and being held at that place and with good weather conditions it could not help being a success. Carlson, Pettee, Curtin, Leonard Metcalf, Fairfield, Shepard, Dean, Parks, Hutchinson, Neumann, Sargent, Johnston, J. W. Hall and Fuller came from Boston, Kales from Detroit, Parrish from Richmond, Heywood from Worcester, Locke from Framingham, Nutter from Bridgewater, Sweetser from Columbus, Ohio, Ober from Newport, Skinner from Oneida, N. Y., Look from Providence, McCaw from Cincinnati and Dwight Robinson and his son from New York.

Most of these arrived on Friday and stayed till Sunday afternoon. On his arrival Pettee was met with the news that his sister had been killed in an automobile accident, and accompanied by Metcalf immediately returned to Boston, Metcalf coming back Saturday morning. I am sure that I express the sentiment of all when I say he has our sincere sympathy in his bereavement.

Saturday morning the golf and tennis enthusiasts got out, but it was noticeable that the galleries were usually much larger than the contestants. Saturday afternoon there was more golf and a large party went down the cape to Harwichport and Chatham for a ride and to see the Kales estates in the former town.

Saturday evening after a most bountiful dinner, which was preluded by the "Rackety Whack" cheer, a meeting was held on the porch of the cottage that was our domicile, which lasted till nearly midnight. The secretary first read letters, extracts of which are given herewith from Westcott, Walker, Newkirk, Mathews, E. N. Stone, Moore and French. It was voted to give \$100 to the fund for undergraduate athletics, responding to an appeal therefor, from Allan Winter Rowe, the secretary-treasurer of that fund. Then followed the election of officers, which resulted in the choice of W. R. Kales as president, W. S. Hutchinson as vice-president and John W. Hall as secretary-treasurer. This completed the business, but there was a long discussion of Institute affairs from many angles, and the reading of the Class history written by Murray Warner, which has come into the hands of Leonard Metcalf.

Sunday morning after breakfast the discussion of Institute affairs was again taken up by one group, while others went out on the golf links and tennis courts, and soon after noon goodbys were said and the party broke up.

Again it is necessary to announce the death of one of our number. Herbert Stanley Miller was operated on for appendicitis on April 27 and died May 7. Miller was president of the Lake Torpedo Boat Co. with general offices at Bridgeport, Conn.

Besides topics of general interest such as who is to be the President of the Institute, the cost of tuition, athletics, it was noted that where two or three were gathered together the talk was pretty sure to turn to a discussion and description of the rising or risen generation, what college he, she or they attend, when to be married, etc.,

Two suggestions were made that should have the consideration of the Class. One is that we do not get together often enough, and that instead of every five years this sort of thing ought to be done every year, as we get older the experiences we exchange being of more value and interest. The other that the next reunion be held somewhere on the Connecticut shore.

The following are extracts from letters received by the secretary:

Allen French wrote:

"I am sorry not to be able to attend the reunion at Wianno. The fact is that within a week I am to be married (you know my wife died four years ago) and I simply cannot take the time, though I shall be very sorry not to be at the jollification. Give my regards to all the boys, and my regrets."

Frank T. Westcott also sent the following:

"I find that it will be impossible to attend the reunion this year. One of the main

reasons for my not attending is that I have a son in the graduating class this year and cannot be in two places at the same time. Am trying to make a living by having an office as civil engineer in North Attleboro, Mass."

Francis Walker wrote as follows:

"My dear classmates of '92: I regret very much that I cannot make the reunion this year at Wianno. It is just the kind of reunion I would enjoy and I like that Cape Cod Coast fine, but as usual my work prevents me from getting away at this time.

I fancy that I am the only one of '92 who has become in any sense a policeman. The chief economist of the Federal Trade Commission is more or less just that. We help run the traffic and we sometimes chase bootleggers. Those who live on the delights of popularity would not stay on the job long, but every game has its charm if you play it right.

As the Supreme Court has begun to quote us now as authority we expect a great increase in circulation, which is of course gratis, but it is not light reading — it wouldn't do at all at Wianno. I used to play the golf course there and wish I were going to play it again with you. My game has gone back a good deal since twenty years ago but not my optimism in facing any old hazard.

I have been very unlucky in not seeing much of classmates since '92, but meeting Metcalf in Rome in December, 1907, made sightseeing a pleasure. As I said at the beginning I wish I could be with you and hope you will all have a bully time."

Walter M. Newkirk says in part:

"As you will notice from this letterhead, I am still with William and Harvey Rowland, Inc., Automobile Springs, Frankford, Pa., which company I joined in 1910. I became general manager in 1915, and a little later was saddled with the title of vice-president as well. Our company dates back considerably over one hundred years, which usually would indicate a pretty uniform rate of growth. In our case, however, we have about trebled our size since I came in 1910. Manufacturing methods have been changed completely, relieving the industry of the mystery and 'art' formerly considered an inseparable part of it. Similar development has been taking place simultaneously in the production of practically all other automobile parts, otherwise the automobile would not today be what it is, either mechanically or in cost, and consequently wide use. I am glad to have had a hand in it.

During the war I was one of a group of volunteer engineers who designed the Government line of military trucks. Other than this, I took no active part in the war."

The following is from Albert P. Mathews:

"I cannot tell you how sorry I am not to be able to get back to the thirtieth reunion, but I am taking my wife and daughter for a trip to Europe and we sail on the first of June. I am going over to attend the International Congress of Pure and Applied Chemistry at Lyons, France, and to renew old acquaintances and make, I hope, many new acquaintanceships with the biochemists of France, Belgium, Holland and England. Please greet the men of '92 for me. It would do me a world of good to grasp the hand of each one of them. Most of them I have not seen since leaving the Institute, but as I think of it, it was but yesterday that I was drilling in John Curtin's Company and with May, McCaw, McCulloch, Mansfield, Meserve, Metcalf and all the others whose names begin with "M" or thereabouts; that I was struggling with analytical geometry. Tech taught us all the supreme value of hard work. I feel sure that she needs our support at the present time more than at any period through which she has passed, for she seems at present to be drifting and to need the hand of a strong man like Francis A. Walker at the helm. Give my love to all the boys and with warm greetings to yourself.

Who is the Class grandfather? Hail him from me. May his posterity increase in the land and provide many loyal sons of Technology."

"I regret that I cannot be present at the reunion of the Class of '92. I have always felt that it was very kind of you to include me as a member, as I did not finish the entire course in architecture. The work at the Institute has been of great benefit to me. Four years after leaving school I started in the appraisal department of the Title Guarantee and Trust Company and I am now responsible for all their loans in the City of Brooklyn. The work has been congenial and I am glad that I have found the right corner. I shall take pleasure in supporting the Class in any enterprise they attempt and I hope that the reunion will be a great success.— E. N. STONE."

Frederic C. Moore wrote:

"You asked for a little personal information. I have been in fire insurance work ever since graduation and with the Hartford Fire Insurance Company for seventeen years. Not having any sons to send to Tech, I am sending my daughter to Wellesley, which is next door to it. I am happy to say that my health has always been good but I begin to think that my mind is failing because after many years of wet fly fishing, I have this season started in seriously to fish 'dry' fly and it takes some self-restraint to miss the strikes I do on dry fly without going back to wet fly again.

If W. N. Newkirk is in the crowd, give him my special regards."

1893

FREDERIC H. FAY, *Secretary*, 15 Beacon Street, Boston, Mass.

GEORGE B. GLIDDEN, *Assistant Secretary*, 551 Tremont Street, Boston, Mass.

The Class of '93 held its annual meeting and field day on Tuesday, June 13, 1922, at the Tedesco Club. The men assembled at 11.30 at Hotel Lenox and went to Tedesco over the road. The weather was most propitious and the drive down was thoroughly enjoyed by all. On arriving at the clubhouse, a fine lunch was served, after which a nine hole putting match was started. Wright Fabyan suggested that the men be auctioned off and the bids ran from 10 cents to \$1.10. As usual Henry Morss bought in the lucky man, A. B. Edwards, who made the round in twenty-four. Other scores ran as high as fifty-one. Out of consideration for the high scorers, their names are withheld. Immediately after the putting match the golfers started, followed by a gallery of non-combatants. Side remarks were pertinently but quietly made by the non-players. Natural modesty and Class loyalty prevent the writer from chronicling the remarks of the players. After golf came the base ball game between the Oranges and the Blacks. It may be said right here that Wright Fabyan, Class president, ran the reunion, Bert Dawes ran the golf, Roy Beattie ran the ball game and the Blacks ran the bases. Score 11 to 9 with the Blacks leading from the start. After the ball game came the annual dinner and Class meeting.

Just before dinner a toast was drunk to Fred H. Fay, who was attending his daughter's graduation at Vassar. This is the second time in the history of the Class that the assistant secretary has been called upon to do any work, but Fay's telegram to the Class, which was read, assured us that he would be on hand for our thirtieth, next June. Fine!

After dinner President Fabyan suggested that the annual election be deferred until October. This looked as if Fabyan wished to be president a few months longer, and his suggestion was out-voted on motion of Glidden that the present officers should hold office for the ensuing year. Unanimously and vociferously carried. Annual meeting adjourned. We then heard from Stose, Buchanan, Soley, and Beattie, who gave us short accounts of their present lines of work.

Bert Dawes awarded the following prizes:

Ash tray to Fred Dillon for first prize, golf; ash tray to Harry Latham for second prize, golf; box of cigars to A. B. Edwards for first prize, putting; box of cigarettes to Billy Lamb for second prize, putting; wine glass to Jimmie Reed for highest score, golf; volume of "Snappy Stories" to Billy Page for highest score, putting; bottle of rye to Roy Beattie, Captain of the losing ball team; box of wonderful cigarettes to each member of the winning ball team.

We then motored back to Boston. Those present: Ashton, Hopewell Waldron Fabyan, Morss, J. H. Reed, A. B. Edwards, Buchanan, R. N. Wallis, Spofford, Ed. Page, Abbott, Stose, Wingate, Billy Page, E. S. Page, Soley, Lamb, Beattie, Dearborn, Dillon Latham, Dawes, Glidden.

1894

S. C. PRESCOTT, *Secretary*, M. I. T., Cambridge, Mass.

The outstanding event of the season, so far as '94 is concerned, occurred on Friday evening, June 16, when our President, Bovey, gave a dinner to the members of '94 who were able to attend. This affair was held at the University Club in Boston and was pre-

ceded for a few of us by luncheon at the Walker Memorial at the Institute and an afternoon at golf at the Belmont Spring Country Club. Those who were able to take advantage of Bovey's hospitality were as follows:

Barstow, Bean, Ripley, Piper, Howes, W. H. Pratt, Spalding, E. M. Hunt, Warren, Batson, Taylor, Ferguson, Moore, Claflin, Day, Chapman, Adams and Prescott.

A very enjoyable evening was spent discussing the affairs of mutual interest and reviewing the scenes of early days. Spalding brought a photograph of the '94 Battalion drawn up in battle array before the Rogers Building which excited great interest and we found much enjoyment in trying to pick out the members of the Class as they appeared in their uniforms in 1891. At golf during the afternoon, the chief match was between Spalding, who had at the time of the last reunion won the Class championship, and President Bovey. They were either very evenly matched or else unusually courteous to each other as the result at the end of the eighteen holes was a win for Spalding by one point on medal play and a win by Bovey by one point of match play. Ferguson, Hunt, Chapman and Prescott played a four-ball match which was fiercely contested, the odds at the finish being in favor of Hunt. Ripley acted as official scorer and Warren as consultant. Altogether a very delightful afternoon was spent by those who were able to go out. The whole affair was in effect a little '94 reunion and served to stimulate in all those who were present renewed interest in the thirtieth reunion which will take place in 1924. The thanks of the whole class are due to Bovey for his thoughtfulness and his hospitality.

Among the graduates of the class of 1922 were two sons of '94 men, W. H. Bovey, Jr., and W. E. Howland, son of F. S. Howland. The secretary had the pleasure of seeing "Chub" for a few minutes and is of the impression that time has dealt very kindly with him in the matter of general well being and youthful appearance.

The invitations to the Bovey dinner called forth a considerable number of replies from different members of the Class which have been of great interest. Regrets were received from a large number who expressed their thanks and appreciation to Bovey, as well as their great disappointment at being unable to attend. Incidentally, these letters have led to the garnering in by the secretary of a few items of news.

Leonard is engaged in civil engineering work in Boston and vicinity and lives at 7 Parkton Road, Jamaica Plain. — Ted Varney is travelling in Europe in the interests of the Aluminum Co. of America of which he is electrical engineer of the sales department. — Tenney, who has been our most invariably constant attendant at '94 affairs, was unable to be with us this year as he is on a well-earned vacation in the country. — Abbott was on his way to the Mt. Wilson Observatory in California where he has scientific studies under way, so could not be present. — Beardsell had to go west on business and could not attend. — Lovejoy, who has been recently honored by election as a Term Member of the Corporation, was unable to be in Boston this week as he was here the week before and the Eastman Kodak Co. could not permit him to be away from Rochester for two weeks in succession. — Earl Jenks wrote from Reading, Pa. that only an important engagement there kept him from being present and that nothing would give him more pleasure than to join the class to meet President Bovey, and also to show what a poor golfer he is. — Tidd sent word from White Plains, N. Y. that he would be unable to attend and expressed much regret. — Mrs. deLancey and Mrs. Sawyer, better known to the Class as Miss Gallop and Miss Warren, sent cordial notes regretting. We certainly must try to get our women members at the next reunion. — J. Howland Gardner was detained in New York on business and could not attend, and Harry Gardner had a professional engagement of long standing which made it impossible for him to come. — Scott writes that he is now connected with the Chemical Warfare Service, United States Army, Edgewood Arsenal, Edgewood, Md. — Dana was unable to be present, but expects to be at his summer home in Wianno on Cape Cod sometime after the middle of July.

Joe Throp wrote from Blue Ridge Summit, Pa. that it would be impossible for him to make a special trip to Boston at this time, much as he would like to meet up with the '94 gang and partake of the hospitality of Bovey and Boston. He mentioned the possibility of passing through Boston late in the fall and if he does so without showing up at the Institute he may expect to be ex-communicated.

Reynolds is still with the United Securities Co., 47 Ames Building, but was unable to attend as he was obliged to be out of town during the week of the dinner. — Leonard Tufts hoped and intended to be with us but the very serious illness of his mother made it impossible for him to attend. The sympathy and best wishes of the whole Class will go

out to him at this time, as well as the universal regret that Tufts could not be with us. — Taber has forsaken civil engineering and become a lawyer and has an office in the Kimball Building, Boston. — Pollock was kept from attending the dinner by his obligatory attendance at a hearing on opening specifications before the Board of Apportionment and Estimates in New York where he is a consulting engineer specializing in highways and zoning systems.

Lewis Greenleaf sent a characteristic message which made us regret still more his inability to come. He writes: "While I should like very much to go to Boston and take advantage of good old Bovey's hospitality, it comes at a time when I cannot in fairness to my family get away. I have a son at Yale who arrives home on the fifteenth after his junior year with several friends, and a daughter at Farmington who arrives on that date with several girl friends for a house party. I appreciate that I have been a first rate slacker about attending reunions, but something always seems to interfere. Perhaps I dread meeting my classmates and seeing how fat, gray or bald-headed they are becoming. You may protest, but when tennis is dropped and golf only is mentioned, we are getting on. Perhaps when we get to croquet I may show up. Please give my best regards to Bovey and any others that may remember me." For Greenleaf's benefit we will say right here that at the thirtieth reunion croquet will be added to the list of sports and there will be no excuse for his non-attendance.

Bean left the national banks of New Hampshire for a few minutes and came down to attend the dinner. As vice-president of the New Hampshire Tech Club, he has a particularly pleasant relation with the Tech men in the Granite State. — Westcott is living in Harvard, Mass., and is the proprietor of Rock Spring Farm. '94 has developed a number of these gentlemen farmers who, having been highly successful in their professions, are now equally highly successful in scientific agriculture. In addition to Westcott, Duckworth, Piper and Pechin belong to this group. — Spalding, our golf champion, is a member of the firm of Collins, Spalding & Co., Shawmut Bank Building, Boston. — Nash is still associated with Stone & Webster, as is also Cheney. — Weston was unable to attend the dinner owing to the necessity for a visit to Oklahoma City to go over plans for new water works improvements in that city.

The Class will learn with very deep regret of the death of A. G. Robb of Amherst, N. S., who died very suddenly about a year ago from blood poisoning. Information regarding his demise was only received in reply to the invitation to the Bovey dinner. — The secretary has also learned from Kenneth Woods of the death of Robert Loring which took place suddenly some months ago.

Claffin is now associated with the L. B. Fortner Co., dealers in aniline colors and dyeing specialists at 102 Pearl Street, Boston. — Kittredge writes from 266 Broad Street, Providence, where he is now located, but fails to give his particular job. — Jesse Holder is a member of the Holder Coal Co., dealers in coal and wood in Lynn, Mass. — The Class has at last received political distinction as one of our members, Harry A. Baldwin, has been elected a representative to Congress from Hawaii. His election was a sweeping one, defeating his opponent by a vote of more than two to one. It is to be hoped that during his term of service at Washington he will find it possible to visit Boston and renew his old acquaintances with the town and the members of the Class.

A. J. Lynch has been appointed assistant prohibition director in Boston. "Al" Lynch, as he is familiarly known to thousands who have made his acquaintance during his twenty-four years of service in the United States Revenue Department, was a chemist immediately after leaving the Institute and has been in the Revenue Department since 1898. He has never found it possible to attend reunions and apparently did not feel that it was necessary to inspect the Bovey dinner, although he would have been most welcome if he had come unofficially. — Noa is now located at Estancia, New Mexico.

The Class may be interested to know that the secretary has been appointed permanent head of the Department of Biology and Public Health at the Institute, taking the post made vacant by the death of Professor Sedgwick.

1895

FRANK A. BOURNE, *Secretary*, 70 Kilby Street, Boston, Mass.

THE MONTHLY LUNCHEON OF THE NEW YORK MEMBERS was called by Major Ames at the Railroad Club, 30 Church Street, on May 31 — fifteen present: Ames, Canfield,

Clafin, Coddington, Fred Cutter, Donham, Drake, Draper, Gardiner, Hannah, Huxley, Moore, Swope, Thomas and Wiggin. The next luncheon will be called by Clafin in September — place not yet selected. Members of the Class visiting New York on the last Wednesday of any month are urged to call up one of the New York members and find out where to meet. Fourteen or fifteen congenial classmates will always be glad to see them and learn what is going on in other parts of the country. Although no luncheons are scheduled for July or August, doubtless one could be arranged in a hurry to meet any visitor who may turn up during those months.

THE ANNUAL SPRING OUTING was held as usual at the Riversea Club, Saybrook, Connecticut, on June 9, 10, and 11. Hurd, Rourke, Weston, George Cutter, Alden, Lawrence Barr, W. S. Williams, Hannah, Schmitz, Swope, Huxley, Fred Cutter, Canfield and Sheridan were there. It is noticeable that in each of the three successive outings the New York and Boston districts have been just about equally represented, showing that the location is most convenient. The principal attraction seemed to be golf. A select few took a dip each morning before breakfast. There are excellent tennis courts, but only one member brought his racket this year. The country offers fine roads and delightful scenery for motoring, and plenty of cars are for hire. The great American indoor sport held the attention of everyone Saturday evening. John Howland Gardner, '94, who has a summer home at Lyme, a short distance away, drove over Sunday morning, and took a party over to his home for a little visit and refreshment. Following our example of two years ago two other classes are holding their twentieth and twenty-fifth reunions at the Riverseas Club this year, and several other classes were turned down for lack of room. The convenience of the location, attractiveness of surroundings, comfort of the Club and hospitality of the management make it an ideal resort for such affairs. Last year we christened it the '95 Country Club, but at the present rate of growth it will have to be called the Tech Country Club. The Club has just purchased an adjacent cottage having fifteen rooms and almost as many baths, so that accommodations are ample without crowding. An informal inquiry indicated that the Class desires to hold an outing there every year at about the same time and that at least a dozen or fifteen men will always attend.

Faville, of San Francisco, who was registered with '95, though doing a large part of his work with '96, was elected president of the American Institute of Architects at the annual convention at Chicago, June 9. This is the first time that honor has been given to an architect of the far west. It is a tribute to his ability as a designer, and also shows the desire of the national organization to show that it is non-sectional in its aim. Faville did brilliant work at the Institute, and with Bliss, '95, under the firm name of Bliss & Faville, went rapidly to the front in San Francisco.

While '95 was holding its annual outing at Saybrook, Faville, of San Francisco, Leber, of York, Pennsylvania, Owen of New Orleans, and Bourne of Boston, all of '95, Course IV, had a little reunion of their own in Chicago at the annual convention of the American Institute of Architects.

Draper, whose home port is now San Francisco, California, attended the May luncheon of the New York members, while East on a trip. He lived for several years in Russia, engaged in mining operations, and returned to this country in 1917 with a quantity of radium which he smuggled through. He is not only familiar with the natural resources of Russia, but is also as well informed on present conditions as anyone outside the country can be. He entertained the members at luncheon with his views on the probable future of Russia.

Frank Schmitz has been made secretary of the Mahogany Association, which is composed of twenty-two member corporations, organized for the purpose of disseminating information among architects and the public on the use and advantages of mahogany. He says the popular impression that mahogany interior finish is too expensive for the average home builder is erroneous, and he is preparing literature and demonstrations to prove it. The office of the association is at 1133 Broadway, New York City.

Dr. Louis Chapman wired the Class at Saybrook, in June, that he was prevented from attending the outing there by an operation for appendicitis, from which he was then recovering.

Gerard Swope was elected president of the General Electric Company on May 16. Most of Swope's business life had been spent with the Western Electric Company. He was comparatively a newcomer to the General Electric organization; having left the

Western to become president in January, 1919, of the International General Electric Company, formed at that time to handle the foreign business of the General Electric Company. His election to the office of president of the parent company — the biggest electrical organization in the world — was in recognition of his extraordinary genius in corporate organization and finance as well as his firm grasp on the complex engineering and distributing problems which he confronted and solved with marked success in the International Company. His election has been the subject of extended comment in the technical press and has created wide interest in electrical circles. He has generally been referred to as a brilliant example of an engineer-executive, a rare combination of technical ability coupled with a remarkable capacity for organization and administration. He is located at the general offices of the company at 120 Broadway, New York.

Lawrence Barr has sold out his business in Pittsburgh, where he lived for several years, and has built a home in Pinehurst, North Carolina. He motored up from Pinehurst with Mrs. Barr to attend the outing at Saybrook and also the thirtieth reunion of his Harvard class at Cambridge.

Rourke has been appointed by Mayor Curley to the Transit Department Commission of the City of Boston. The *Boston Globe* of April 1 says:

"Mr. Rourke is treasurer of the McCulloch Manufacturing Company. He lives with his family at 6 Wayne Street, Roxbury. Mr. Rourke was born in Abington forty-nine years ago. In 1895 he was graduated as a civil engineer at Tech. To secure valuable experience at railroad construction he became a section hand on the Boston and Maine. Soon afterward he secured the position of supervisor of tracks on the Panama Railroad, and two years later he became roadmaster on Guayaquil & Quito Railroad in Ecuador. After a year of that service he became a contractor and built new sections of that road. In 1903 he returned to the United States, and in partnership with his brother did a variety of work on contract till the construction of the Panama Canal began, when he became superintendent of construction. He held a number of other important posts, ending with that of division engineer. In 1910 by solicitation of Mayor Fitzgerald, Mr. Rourke returned to this country and became superintendent of streets. The mayor has never seen him and appointed him owing to his high reputation as an engineer. Not long afterward the Street Department was merged with the City Engineer's Department and the Sewer and Water Department into a unit known as the Public Works Department, of which Mr. Rourke became the head at a salary of \$9,000 a year. On the expiration of his term, soon after the first administration of Mayor Curley began, Mr. Rourke resigned as Public Works Commissioner. He belongs to the Elks, the Knights of Columbus and several societies of engineers.

Dr. Henry O. Marcy, Jr., who took a short special course with '95, died of blood poisoning, at his home, 140 Sargent Street, Newton, Mass. Dr. Marcy married Miss Eleanor Nichols, of Newton, who survives him, with their two children, Miss Eleanor Beatrice Marcy and Henry O. Marcy, 3. His father, Dr. Henry O. Marcy, the eminent surgeon of Boston and Cambridge, has been intimately associated with the development of the Institute.

1896

CHARLES E. LOCKE, *Secretary*, M. I. T., Cambridge, Mass.

J. ARNOLD ROCKWELL, *Assistant Secretary*, 24 Garden Street, Cambridge, Mass.

Following the plans suggested last year by the men who attended the reunion at the Wianno Club, Osterville, Mass., arrangements were made so that members of the Class of '96 could gather for a week-end party with their wives and families, over June 17. Notices were sent to all members who attended last year. A large number of replies were received but practically without exception every fellow stated that the conditions were such that it was impossible for him to get away this year. The result was that the party was given up. As practically every man, when writing, expressed the hope that he would be able to attend next year, it is proposed to again circularize the fellows in June, 1923, for an informal week-end gathering at Wianno, where kindred spirits can get together, play golf, and have a general gathering for sociability.

George Hewins, in sending his reply, stated that he had just finished furnishing his

new house in Worcester. — Joe Driscoll reported that Jimmie Driscoll had been in the hospital with an operation but was now back on his feet again.

Regarding the twenty-five year book, the committee in charge consists of Harry Brown, Lucius Tyler, Bert Thompson, Eugene Hultman, A. D. MacLachlan, Eddie Mansfield, Rockwell and Locke. The committee decided on a three dollar book to be as comprehensive as possible and still not elaborate or expensive. In order to determine the exact support that can be obtained for this book the Class is being circularized for subscriptions and support. It is felt that at least one hundred and fifty subscriptions should be obtained in order to warrant the publication of the book. This is a matter which concerns every member of the Class. The committee realize that they have a considerable job cut out for them and that the book can be put through satisfactorily only if every member of the Class gives it full support. This does not mean payment in advance, because the book is already underwritten, but it means that prompt and full replies, giving desired information, will be a tremendous help. It is, therefore, hoped by the committee that every one will take a personal interest in the book and will do everything possible to assist the committee.

The Class scholarship fund has not been pushed except as men who have signed up at Wianno have been asked to pay in their first instalment. At the present date the standing of the Wianno contingent is roughly \$6,000 pledged and \$1,200 paid in. Later on, when the entire Class has been canvassed, the sum will be much larger. The book committee considered the question of combining the campaign for a book with the campaign for scholarship fund but decided that the wisest procedure would be to separate the two and let the book campaign precede the scholarship campaign.

Joe Clary was on from Washington the latter part of May and made an unsuccessful attempt to see the secretary in Cambridge. It was a great disappointment to the latter not to see Joe and he hopes for better luck next time.

Classmates will be very sorry to hear that on the twenty-sixth of January Elmer H. Robinson's residence on Woburn Street, Reading, was destroyed by fire with most of its contents. The fire occurred during the evening and Robinson was away from home in an adjoining town. His son made a record trip for him in an automobile and he was able to save a number of articles from the house which would otherwise have been destroyed. The remains of the burned house have been razed and he intends to rebuild on the same site. Meantime Robinson and his family consisting of his wife, son and daughter are living with relatives in the same town.

The sad news has been received of the death of Johnny Putnam, which occurred in Chicago, at his home, 5752 Winthrop Avenue, on Thursday, February 23. The funeral was Saturday afternoon, February 25 and the interment was at Graceland Cemetery, Providence, R. I.

Putnam was born in Houlton, Maine, June 17, 1874. He attended the English High School and graduated from Tech in the Electrical Engineering Course and was a member of the Delta Tau Delta fraternity. He entered the employ of the American Bell Telephone Company in 1896, as inspector, being located in Chicago. In 1899 he became interested in the manufacture of telephone apparatus, with the Clark Automatic Telephone Manufacturing Company, at Providence, R. I., remaining with this company as its general manager from 1899 until 1904, after which date he entered the employ of the Central Union Telephone Company. He was with this company for twelve years as district commercial manager, and his work took him over a great part of northern Indiana, although his principal occupation was the management of the exchange at South Bend. His headquarters may be said to have been South Bend and Indianapolis and during his residence in Indianapolis he became one of the best known telephone men on the field as well as one of the best informed. He formed scores of friends in the territory, who deeply regretted his departure from the telephone field about six years ago when he associated himself as bond salesman with Kennett-Cowan & Co., bankers, with offices in the Corn Exchange Bank Building, Chicago.

The foregoing facts have been supplied by Sturm who further adds that after Putnam left South Bend and came to Chicago he was first with Kennett-Cowan & Co., but later went with the National City Company and that by his diligent efforts and ability at making friends he soon had a large clientele and was considered one of the most successful bond salesmen on the street. He always took an active interest in the Northwestern Association and all other Tech doings in the vicinity.

He married Marion Brown Traver of Providence, R. I., on November 29, 1905, and he left one son, John, Jr. Mrs. Putnam has written the secretary telling what a deep regret it was to John that he was unable to attend the twenty-fifth anniversary but his condition for a year previous, although he never complained, was such that it was unwise for him to undertake anything extra outside of his business. The secretary would add that he saw John occasionally in passing through Chicago and enjoyed thoroughly the few minutes that were usually available for calling. John had the same cheerful temperament but to one who was accustomed to remember him as tall and lank as a student, it was a great contrast to see how he had rounded out with maturity.

Professor Jacobs and Mrs. Jacobs are planning to spend the summer in England, making a short trip across the Channel to France. They sailed from New York on July 1 and expect to return about the middle of September.

Karl Almon Pauly, '96, has been appointed head of the power and mining department of the General Electric Company at Schenectady. Mr. Pauly has been employed in the electrical department of the General Electric since graduation from Course VI. He first entered the testing course, and then went in one of the designing engineering departments. More recently he was in the power and mining department. He was head of the steel mill section of this department when promoted to his present position.

Buster Crosby reports that he is now twice grandpa, as his other twin has just put the grandpa tag on him. Patricia Hallett, nine pounds, was born May 29, 1922, to Mary Josephine (Crosby) Hallett and Horace Hallett, at Provincetown, Mass. Everybody doing nicely, including grandpa.

Crosby painted his house and it looked so good that a fellow came along and hired it for the summer so Buster has to live in a tent.

Fred H. Pratt has reported a new address at 296 East 15th Street, North, Portland, Oregon. He says that he has been knocking about the seven seas for the past few years in the shipping game so that much of his mail and all M. I. T. doings have missed him. He is with the North Atlantic and Western Steamship Company which has a home office at 111 Summer Street, Boston, Mass.

William Douglas Smith has been relocated at East Chicago, where his address is care G. S. Brooks, International Lead Refining Co., East Chicago, Indiana.

Charley Paul has sent the secretary a program of the spring meeting of the American Society of Civil Engineers, at Dayton, Ohio, April 5 to 7. The special subject was "Flood Problems." As President of the Dayton Local Section, Paul called the meeting to order, at the first session, and also contributed a paper on the "Flood Problems of the Miami Valley and their Solution." Another '96 man who was present was N. C. Grover, Chief Hydraulic Engineer of the United States Geological Survey, who presented a paper on "Standing Waves in Rivers." Other Tech men whose names appear on the program are John R. Freeman and Morris Knowles who participated in formal discussions of papers. Paul reports that they had a big time.

Ted Jones has announced the arrival of a son born May 28, almost a year after our twenty-fifth reunion. This is his third child, the first two being girls.

Changes of address are: Paul D. Smith, care George W. Conway, West Chester, Pa.; M. J. Sturm, 232 East Erie Street, Chicago, Ill.; J. Lloyd Wayne, University Club, Indianapolis, Indiana.

1897

CHARLES W. BRADLEE, *Acting Secretary*, 54 Canal Street, Boston, Mass.

Reunion of Class of '97, M. I. T.,
at Old Saybrook, Conn., June, 1922.

The twenty-fifth reunion of '97 occurred at the corner of Long Island Sound and the Connecticut River, June 20 to 23, whereupon some forty-five or more stalwarts gazed at each other curiously.

Twenty of those at Saybrook had not been at the Sagamore reunion six years before; and in many cases had thus not seen each other for a quarter of a century. Recognition of old pals was tumultuous; but was difficult in other cases, the struggle being with memory, with the changes of maturity, and indeed with the primal original incomplete acquaintance

between the thirteen courses. The thirteen courses were represented about as follows: 6, 14, 0, 2, 4, 10, 0, 0, 2, 4, 2, 0, 1.

That uncanny picture book, the '97 senior portfolio, was at hand and eagerly scanned, studied, discussed. A few were earnestly asked to acknowledge their pictures. Prize for the least change went to the two chemists — Schwartz, superintendent of refineries of Ye Southern Oil Co. (in charge of refineries in Savannah, Chicago, Memphis, New York, New Orleans and Texas), and Hugh Moore, chief chemist of Ye Paper Trust and premier authority on utilization of industrial wastes. Twenty-five years had hardly touched them, except that some infernal machine had devoured part of Moore's hand. Tone, from Des Moines (long distance prize), had also used his hand in a coffee grinder — otherwise well preserved.

The photos in the said portfolio, were of that grave and solemn mien that sets out to take up the burdens of life (*i. e.* not merely that stolid distressing stiffness of the calf age, but the colossal sudden seriousness of the Tech senior). Now all was changed — no distress of pose — but the easy suave poise of intrinsic youthfulness. Nearly everybody wore "nickers" and played golf (even those who had to reach out and over); the tennis tournament had many entries, and the baseball game was contested in big-league fashion — score 3 to 2.

Physical indications of maturity could be detected here and there, but youthfulness (as stressed by the real first-edition Bancroft) (self-styled) had greatly increased, and was the key-note of the occasion. Thus, all of those who had attended the twentieth reunion were now seen to be at least ten years younger than six years ago. Most of us could really unbend (mentally).

The effects of a quarter century included appearance of having had enough to eat — average increase in weight estimated at twenty-eight pounds. No decreases observed.

Average hair decreased, Jackson retaining record for minimum. Illsley, close second. Average color of hair, lighter.

The ballgame reflected a keenness, a spirit and scintillation such as no college event ever produced. The diamond was laid out by the division engineer of the metropolitan division of the New York Water Supply, lately returned from installing sewer system at Athens, Greece — by name, W. Spear. He also pitched for the losing team, the loss being due to superior field work of opposing fifteen (captains of both teams showed great skill in disposing their fielders, there being seven and nine short-stops respectively).

Baby Ruth Bancroft (original edition) struck out and assaulted umpire Hugh Moore, jumping on his toes and throwing grass in his face (suspended for five years). Quality of fielding by winning team illustrated by red hot grounder from Worcester, which went clean through three short-stops, caught by fourth, and hurtled to the distended paws of first baser, Atwood. (Yale Bowl, Squantum Destroyer Plant and now building two and one-half million dollar college in Carolina) in easy time to put out the said swatter — elapsed time two minutes, ten seconds. Star play by McCarthy, Course IX, occurred thus: Home base consisted of a piece of seven-eighths board about ten inches wide and three feet long, the same being the subject of discord, the "ins" claiming it should lie end-wise to the pitcher, while the "outs" insisted that it should lie athwart the course, thus giving the pitcher a wide latitude (excuse for the latter view being size of the ball). "Outs" were abetted in this infamy by rear umpire, J. Bancroft (alleged by W. B. not to be original edition Bancroft) (also said to be a money devil and suspected of being "bought"). However, the said swatter McCarthy (remember how pink his cheeks used to be) (they still are), having made one vigorous stroke through a part of the empyrean not occupied by the said large ball, he did then and there cast a shrewd calculating eye at the said twirler (W. Spear) (late of Athens, Greece), and also at the said home plate (*i. e.* seven-eighths board ten inches wide, three feet long); — then, as said twirler was winding up and after he (the said twirler) was so fur wound up as to be beyond recall, this swatter, McCarthy, did divest himself of the bat, did stoop and grab the said home base; and he walloped out such a liner that he was enabled to reach first base before the combined efforts of five short-stops, three left fielders, etc., could retrieve the said large ball and forward same to vicinity of first base — elapsed time, three minutes, ten seconds.

One very regrettable circumstance that characterized the game lay in the keeping of score and statistics by one Walter Humphreys (said to be Registrar of the Massachusetts Institute of Technology), who was obviously prejudiced in favor of the losing team and frequently declared "side out," when but two were really out. However, even this and

his manipulation of the batting order, together with intimidation and practice of runners of carrying second base with them when on the way to third, did not avail against the winning seventeen, although it was conceded that the losing nineteen played a splendid game.

At previous reunions, the prize for swimming has been nonchalantly floated away by Harry Worcester, but John Howland, Course I, on this, his first appearance at a reunion, showed himself a better judge of water. John is a husky strapping, apparently about nineteen or twenty years of age. He says nothing will keep him from reunions hereafter (and so said the others many times). (Prizes were "Volstead" bottles, all metal.)

As to this swimming matter, there was some talk of a high tide in the Sound, and also of a tidal wave purposely opposed to the said Worcester, by intent of an envious Bradlee; but class declined to go back of the returns.

The committee that had done so much preparatory work in arousing us, by every imaginable kind of appeal, had also arranged decorations, banners, tournaments, hats, feeds, timetables, transportation, rooms, bats, balls, charges, music, prizes, pictures, smokes and goodness knows what, were rewarded (as is usual with republics) by being summarily reelected.

The business meeting afforded about the only spectacle of the said repression and stiffness that youthfulness has otherwise so completely replaced, when the possibility of inviting wives to the next reunion was up for — not discussion, but side-stepping, hesitation and affrighted holding of breath. In a cruel moment, a resolution was offered to the effect that all agree to bring wives if Bradlee would (Bradlee being the only remaining upholder of masculine independence present). Professor Breed, recently returned from his honeymoon, whose son recently graduated from Tech, being the first graduating son of '97, is suspected of having brought up the subject. The tenseness of the moment will be known by the fact that the Bancrofts (both alleged original and alleged second edition) forgot to disagree on this matter. Both wanted to know what we others would do if our wives should invite us to wives' class reunions — both B's said they had been through the experience. Several gentlemen gallantly nailed themselves to the cross of loyalty, and there was a sigh of relief when the poor committee was made the goat.

All too soon they began to go, perhaps for another twenty-five years (when we would all be over seventy), perhaps forever. It had taken hours for some of us to recall each other; then, gradually, feature by feature, memory would dig out a semblance.

A kind of cold chill seized us now and again as we sensed the flight of time. Why not pause just a minute — you other members of '97 — and realize how your pulses would quicken to be with classmates a few days; tighten your class activities; write the corresponding secretary a description of yourself and your work; pay your class dues and your alumni dues; and let us pass out to eternity an united class? Are you unable to stop — *i. e.* pause long enough to know where you are at in the rush of time? Should you leave out of your life the inspiration and thrill of a Class reunion? Will you promise yourself you will come to the thirtieth reunion?

The play and diversions furnished the comic relief for the ground swell in every man's consciousness. How we did talk far into the nights; how we poured over the Class pictures, asking each other as to the whereabouts of those that have never returned, even after the lapse of twenty-five years!

Those present included:

- Course I. Atwood, Ballou, Breed, Cowles, Howland and Sawtelle.
- Course II. Bancroft, Burdick, Carrier, Hawkins, Humphreys, Illsley, Jennings, Noble, Russell, Wadleigh, Grover, Hamilton and Baker.
- Course IV. Hering and Jackson.
- Course V. Deavitt, Horsford, Schwartz and Moore.
- Course VI. Eames, Ewing, Gilmore, Howard (and son), Howes, Hubbard,³ Reed, Taylor, Weymouth and Shepard.
- Course IX. Bradlee and McCarthy.
- Course X. Bancroft, Lamb, Pugh and Tone.
- Course XI. Hopkins and Spear.
- Course XIII. Binley.

By HENRY W. BALLOU, *Historian*.

1899

W. MALCOLM CORSE, *Secretary*, 1701 Massachusetts Avenue, Washington, D. C.

W. Scott Matheson writes the following: "Did I tell you about Lane Johnson being in Seattle and the lunch the Tech fellows gave him? If not, would say we had about twenty-five fellows to lunch and Lane told us all about how to make Seattle grow. Also Clancy Lewis and I gave him a Class lunch."

Clancy M. Lewis reports a Class reunion on the Pacific Coast; Lane Johnson, who was out to Seattle in January investigating a steel sheet mill proposition for the Pacific Coast Steel Company, with W. Scott Matheson and Lewis put '99 on the map. Lewis has been appointed resident vice-president and Pacific Coast representative of the American Manufacturers Foreign Credit Underwriters, Inc.; the corporation is stimulating the export business by insuring the solvency of the foreign buyer doing the credit period.

W. S. Newell, '99, Engineering Works Manager, Bath Iron Works, Ltd., Bath, Maine, has just recovered from a combined attack of "flu" and bronchitis. As president of the Bath (Maine) Rotary Club, Newell recently attended in Hartford, Conn., the annual spring conference of Rotary Clubs of the New England district. He ran into George Priest, '99, at this conference, Priest being a member of the Brockton (Mass.) Rotary Club.

Lane Johnson has assumed his duties as chief engineer of the United Engineering and Foundry Co., Pittsburgh, having been previously engaged in consulting engineering work in the Pittsburgh district. He is a graduate of the Massachusetts Institute of Technology and has a broad experience in mill work. Among the firms with which he has been connected are the Colorado Fuel and Iron Co., Kokomo Steel and Wire Co., American Rolling Mill Co., and Alex Laughlin.

W. H. Butler writes as follows:

"As for myself, there is very little to write about. Over here things are very quiet. In our particular line of business we are at present suffering from a lock-out of engineers, so that most factories are closed down or working on very short time. We hope, however, this will be over before long.

No doubt there will be a number of the boys over in Europe this summer and if any of the Class of "Ninety-Nine" are in London, I hope they will come in and see me as I should very much like to renew old acquaintances."

1900

GEORGE CROCKER GIBBS, *Secretary*, 25 South Street, New York, N. Y.

"The TECHNOLOGY REVIEW has received no notes from you for the July number." This is an extract of a letter from the editor of the REVIEW. For the first time since he has been in office, the secretary has been behind time in notes to the REVIEW. We are mutually to blame, you and I. News is slow and so was the secretary. Give him a good backing for the next REVIEW.

The secretary has received a letter from the resigned editor, Robert E. Rogers, expressing his appreciation of the cooperation of the Class secretaries and recommending the new editorial staff. The secretary wishes to express for the Class, our thanks and appreciation of the fine work of Mr. Rogers, for making the REVIEW one of the best alumni magazines in the country. He also wishes to commend the new plans and staff and especially Mr. Lobdell, who is a personal friend of the secretary. We can expect great things from the REVIEW.

Fred B. Wilder, '00, III, who is located at the Dennis Apartments, Long Beach, Cal., writes me that he is at present what is called "Sewer Inspector" of the city of Long Beach but that the job is not quite as bad as it sounds as he has charge of the entire system and has learned a little besides finding the work very enjoyable, as keeping him out all the time in the California sunshine.

The following is from the *Philadelphia Record*, dated April 1, 1922: "When George P. Good as a youth took a job on a Market Street cable car twenty-eight years ago, little did he think that one day he would become a high official of the company. Today Mr.

Good will be installed as superintendent of transportation of the P. R. T. system. His appointment was announced yesterday in connection with the appointment of Elbert G. Allen as chief engineer, another position of great responsibility. The latter was graduated from the Massachusetts Institute of Technology in 1900.

When Stone & Webster constructed Hog Island, Mr. Allen worked about five months on that operation in an advisory capacity. He has worked in general engineering and construction work all over the United States, also had some experience in Italy. His residence is in Ardmore."

Our Chicago correspondent is on the job; the following "news letter" is from Frank D. Chase:

"*Dear George:* Sunday night, and I've been at my desk at home since after dinner. Have had a busy two months rebuilding from the ground up my engineering organization, which was, at the conclusion of the war, the largest perhaps in Chicago. It took two years to get down to bed rock, and now we are taking on men again, and the prospects for continued steady improvement in business are, I believe, very good throughout the country.

The Tech Dinner (annual) was the best in years. Fred Cooke is now at the Naval Training Station at Great Lakes — and honored us with his presence. His naval officer's uniform looks (as they all do) like a railroad conductor's. Fred is fat and handsome and a good engineer. Cliff Leonard has been in South America for two months. He is a director in the First National Bank of Chicago, probably a multi-millionaire and another handsome devil. 1900 is not strongly represented in Chicago, so I can't write much further. Bowditch called me up, *en route* to the coast, a while ago, but I missed him. Henry Morris is a Bureau Chief under Hoover. They are both mining engineers and friends."

The following changes of address are noted: Mr. Cyrus V. Dart, 1750 Grand Avenue, Davenport, Iowa; Mr. Marcy L. Sperry, 147 Milk Street, Boston, Mass.; Mr. Harry M. Thayer, 7 Doden Lane, Flushing, Long Island.

1901

ALLAN W. ROWE, *Secretary*, 295 Commonwealth Avenue, Boston, Mass.

In the last number of the REVIEW your secretary inserted the statement that last year's reunion had been a success, that it would be possible to hold an informal gathering this year and asked those interested to send in word stating their desire. With the avid enthusiasm shown by the Class on all questions of foregathering, up to the present moment at least, no replies have been received. Your secretary's first interpretation was that no member of the Class read the REVIEW. This genial hypothesis, however, was negated by the Alumni Office which stated authoritatively that the Class notes were a big selling factor in determining the REVIEW's circulation and that the Class of '01 was well — let us say respectably represented — among those paying dues. Perforce, your secretary turns to the other alternative, namely, that the individual members of the Class do not wish to reunite. Let us pause for a moment to consider this matter. While it is true in the hot exuberance of youth individual idiosyncrasies offered insuperable obstacles to closer understanding and communion, now that we have embarked on our third decade since graduation and have been in contact with the outside world, some measure of the tolerance of maturity must have entered into the lives of many of the Class. Under these circumstances it seems a pity that we cannot get together in small rallying groups and really learn what thoroughly worth while citizens we all are. Himself a repository of confidence, largely he assumes through his hopeless ineligibility, there was scarcely an attendant at last year's reunion who did not confide to him that some other member of the gathering had been greatly improved by the lapse of time and was really a very decent citizen. Where these reactions were mutual, as in several instances was the case, it not only afforded a measure of happiness to the recipient of the confidence but augured well for future association. Faint but not despairing your secretary is about to embark on another effort. If this copy of the REVIEW reaches you before the notices are out — a contingency that the past would imply to be unlikely — await the latter with anticipation, if not write at once and say what you would like to do. With the shrinking modesty

which your secretary believes all '01 may be characterized, no further communications for past notes have come through. True, Arther Eveland dropped in from Mexico not long ago but with native caution confined himself to verbal statements thereby invoking the moot point of the credibility of witnesses. Arthur has apparently been spending long years in joyous wanderings through foreign lands and has derived much pleasure and profit from his experience. He returns to Mexico in the near future to resume the conduct of mining operations and revolutions — the two vocations being seemingly mutually dependent in that pleasing clime. In conclusion, your secretary notices the following changes of residence: Lieut. Charles L. B. Anderson, Cape Haitian, Haiti, care of Postmaster, New York; William S. Pepperell, 144 Prospect Street, Providence, R. I.; David H. Dowell, Hingham, Mass.; George T. Wilson, 10 Summit Avenue, Lynn, Mass.; Frederick H. Bond, Jr., Frank Irving Cooper Corporation, 33 Cornhill, Boston, Mass.

1902

FREDERICK H. HUNTER, *Secretary*, Box 11, West Roxbury 32, Mass.

BURTON G. PHILBRICK, *Assistant Secretary*, 585 Boylston Street, Boston, Mass.

The twenty-year reunion of the Class was held most successfully at the Riversea Club, Fenwick, Connecticut, June 15 to 18. No more delightful place for such an affair could have been selected and all present wish to have our twenty-five-year gathering there.

The New York bunch, consisting of Montgomery, Fruit, Joe Philbrick, Hammond, Place, Dunc Franklin and Hathaway, reinforced by Freddie Allyn from Montreal and Art Nash from Philadelphia, were first to arrive on Thursday afternoon. Auto parties from the other direction soon drove in; Geromanos with Hunter coming first, Murray Walker with Robinson, Reynolds and Pendergast of Washington (who had come through to Boston) arriving soon after; Galaher followed with Sherman, Grant Taylor, and Adrian Sawyer; Bob Whitney came next with Luke Collier, Gates with Stover from Providence, and Lowe with Kellogg, Ritchie and Jason Mixer, and Titcomb with Burt Philbrick following in. Borden came down by the valley train and Dan Patch arrived via the Shore Line on his return from a business trip in Pennsylvania.

Supper was despatched and the crowd gathered in the living room of the Club. Bill Kellogg as president called on each man in turn to tell the story of his life since he left Tech and a collection of most interesting histories was the result. Letters from several absent classmates were read and reminiscences of many others were given. In the morning, early bathing was inaugurated by Ritchie and Hunter. After breakfast, pictures were taken and then the classmates dispersed to the golf links, tennis courts and other attractions. During the forenoon, Fitch and Lindsly arrived. In the afternoon formal play was started in the golf and tennis matches. Titcomb and Jason Mixer had to leave, but Charlie Mixer and Chick Starr dropped off the west-bound train and Gardner Rogers brought E. E. Nelson from Pawtucket. Bob Baldwin arrived before supper and Lewis Moore with Bassett checked in during the evening.

An informal meeting was held, discussing the Class finances, and a committee consisting of Pendergast, Geromanos and Walker, who had been working quietly during the day, turned in to the treasurer a fund of \$250 to relieve the immediate necessities of the Class. Saturday morning was cloudy, with a brisk wind off the Sound. Finals in tennis and golf were played, with Ritchie as victor on the links, by one stroke over Sherman in thirty-six holes. On the courts, the final round was between Art Nash and Charlie Mixer, the former winning in straight sets. An exhibit of pictures of the children of members was arranged in the living room and ribbons were awarded for the best in each of several age groups. The judging was by Mrs. Jarvis and Miss Prunier, the manager and clerk of the club. The blue ribbon for the best family group was won by the Allyn family of Montreal with a fine picture of seven children.

Fred Mathesius arrived before lunch and took charge of New York's interests in the ball game in the afternoon. Carl Allen and Royal Wales, arriving early in the afternoon, made up a total of forty-three men in all present, for all or part of the outing. The ball game in the afternoon resulted in a sweeping victory for Boston. The teams were as

follows: New York: c., J. Philbrick; p., Nash and Place; 1st, Place and Nash; 2d, Fruit; 3d, Montgomery; s.s., Baldwin; l.f., Hathaway and Hammond; c.f., Pendergast; r.f., Franklin; substitutes, Allen, Mathesius. Boston: c., Fitch; p. and captain, Patch; 1st, Sherman; 2d, Collier; 3d, Gates; s.s., More; l.f., C. Mixer; c.f., Galaher; r.f., B. Philbrick.

Score: New York 1-0-2-0-2-0 5. Boston 4-2-1-0-2-8 17.

Boston took the lead in the first inning, but New York fought gamely until a fusillade of hits in the last of the sixth buried all hope of their catching up and they were willing to call it a day. The heavy hitting of Galaher, the pitching and fielding of the Boston battery, and the daring base running of Mixer were the features of the game. Kellogg umpired with true professional aplomb.

Dinner that evening was a jolly affair, with much singing and cheering, and then a formal Class meeting was convened in the living room. The roll of members who had passed on was read and the Class stood in silent tribute to their memory. It was voted to establish a sustaining membership, five dollars per year, and to cancel all back dues. The secretary made a report of his doings in that office and gave a brief resume of his twelve years' service as Class representative on the Alumni Council. All the officers were reelected, the president, vice-presidents and assistant secretary for one year, and the secretary for a five-year term. President Kellogg, on behalf of the Class, presented the secretary with a handsome purse (this refers to the contents, not the package) as an appreciation of his services to the Class and the fact that he had contributed a considerable amount of clerical work and minor expenses that have never been charged on the books. The meeting broke up with an ovation to the secretary and the members dispersed to various amusements for the balance of the evening.

Sunday morning broke threatening and showery and those who had come by automobile dispersed in various directions soon after breakfast, the New York faithfuls staying through till after lunch. Altogether, it was a most successful affair, the only regret being that a larger number were not present.

The following is taken from the *Salt Lake Telegram* of May 14:

"Under announcement from D. C. Jackling, given out here Saturday, Louis S. Cates has been named general manager of the Utah Copper Company. The appointment has been made effective from May 1. In addition to his new position of general manager, Mr. Cates will also remain a director and the assistant secretary of the company, while R. C. Gemmell, former general manager, will continue as assistant managing director of the Jackling properties. Mr. Cates, who is a mining engineer, was born in Boston, Massachusetts, December 20, 1881. He graduated from the Massachusetts Institute of Technology in 1902, in which year he began as a mine operator in Mexico. He became assistant to the president of the National Steel and Wire Company, New York, in 1903 and in the following year he assumed charge of the construction and development at Bingham Canyon, Utah, of the Boston Consolidated Mining Company's properties, which were taken over by the Utah Copper Company. He became associated with the Ray Consolidated Copper Company in 1910, becoming the general manager and director. He developed a system making it economically possible by underground methods to mine low-grade porphyry ores. At present Mr. Cates holds the following offices: consulting director of the Ray Consolidated Copper Company; director, Gallup American Coal Company; director, Gibson Stores Company, Gibson, New Mexico; director, Intermountain Electric Company, Bankers' Trust Company and National Copper Bank, Salt Lake City; assistant general manager, Bingham and Garfield Railway Company; secretary-treasurer and director, Garfield Water Company and also the Garfield Improvement Company; president of the Garfield Banking Company; president of the Bingham State Bank and director of the Utah Fire Clay Company. On September 12, 1905, Mr. Cates married Helen Mary Gillespie of Salt Lake City."

The following new addresses have recently reached the secretary. Some of them have not yet been verified:

A. M. Hamblet, Goodyear Rubber Company, Akron, Ohio; Richard L. Frost, Ford Motor Car Company, Detroit, Mich.; Earl B. Crane, 704 Hoyt Street, Portland, Ore.; Herbert May, 70 East 45th Street, New York City, Room 3051; Avery, 288 Main Street, Greenfield, Mass.; James MacF. Baker, 21 East 40th Street, New York City; Charles Boardman with the Clifton Manufacturing Company, Jamaica Plain, Mass.; W. N. Brown, 1448 Highland Avenue, Lakewood, Ohio; W. L. Cook, The Wyoming, Washington, D. C.; A. W. Crowell, 20 Seventh Street, New Bedford, Mass.; H. F. Daly, Depart-

ment Street Railways, City of Detroit, Administration Building, Detroit, Mich.; Farmer, 1302 Rodney Street, Wilmington, Del.; Miss Beulah C. Hill, 1612 Corn Exchange Bank Building, Chicago, Ill.; A. A. Jackson, 495 Columbia Road, Boston 25, Mass.; Lombard, 760 South Euclid Avenue, Pasadena, Cal.; John R. Morse, 865 Sillman Avenue, Erie, Pa.; W. V. Morse, 767 Stewart Building, Seattle, Wash.; A. T. Nelson, Beacon Construction Company, 110 State Street, Boston; A. R. Nichols, 1200 Second Avenue, South, Minneapolis, Minn.; G. A. Worden, 107 Bass Avenue, Gloucester, Mass.

Jimmie Smith is now manager of the Boston office of Bodel & Co., the well known investment house, with which he has been connected for some years. — Charles S. Thomas has left the Union Oil Company of California and has hung out his shingle as consulting engineer for the oil industry in Los Angeles. — Red Proctor is a candidate for the Republican nomination for governor of Vermont. His father and his older brother have held this honorable office in the past. — Borden is president of Borden & Howard, Grain and Coal, Woodstock, Vt. — Jack Fruit is connected with the Puritan Mortgage Company, 50 East 42d Street, New York City (Residence preferred for mails; 152 Nutley Avenue, Nutley, N. J.) — Geromanos has organized the Motor Service Associates, a coöperative automobile club and plans to erect a clubhouse and service station in Brookline, Mass., in the near future. — Goldenberg is manager of the Detroit office of the Truscon Steel Company, Detroit, Mich. — Lindsly is an inspector for the Factory Mutual Insurance Companies, 184 High Street, Boston, Mass. — Litchman is assistant to Professor Locke, Department of Mining Engineering, M. I. T., residence, Marblehead Mass. — Maj. Charles E. McCarthy is at Fort Davis, Gaton, Canal Zone. — Ethelbert Parker, care of Australian Bank of Commerce, Sidney, New South Wales. Parker is in Australia, supervising the laying of bitulithic pavement, he having been with Warren Brothers Co. of Boston, the proprietors of this paving for many years. — Sears is with Fay, Spofford & Thorndike, consulting engineers of Boston. — Wadleigh is now in command of the Marine Department of the U.S.S. *Maryland*, flag ship of the North Atlantic Squadron.

1903

CHESTER S. ALDRICH, *Assistant Secretary*, 10 Beaufort Road, Jamacia Plain, Mass.

Capt. Walter H. Adams, U. S. A., who has been stationed for some time at Camp Lewis, Washington (State), has been transferred to the office of the Chief of Ordnance, Washington, D. C. He came east with his wife and after spending a few days with his parents in Winchester, has gone over to Washington to assume his new duties. His wife will follow him shortly and they will make their home in the capitol city for as long a time as the frequent changes of army life will permit.

A communication from Paul R. Parker, advises that he has entered into partnership with George E. Atkins, '04, under the name of Atkins & Parker, Engineers. His office address has therefore changed to 507 Hobart Building, 582 Market Street, San Francisco, California.

1904

HENRY W. STEVENS, *Secretary*, 12 Garrison Street, Chestnut Hill, Mass.

AMASA M. HOLCOMBE, *Assistant Secretary*, 3305 Eighteenth Street N. W., Washington, D. C.

In opening the Class notes for this issue, it gives the secretary a great deal of pleasure to state that at last it seems as if one warmly disputed point has been settled, namely, the question as to whether Selskar Gunn is a member of '04 or '05.

In the April issue of the REVIEW there appears in the 1905 notes a letter from one George C. Thomas, '05, which advances the idea that "Gunny" really belongs to '05, simply because he happened to get his degree with them, and also because when temporarily out of funds, said Thomas was in the habit of acting as financing agent to "Gunny" by doling out a pittance of thirty cents a day until "Gunny" was again in funds, when the debt would be discharged. Thomas admits that Gunny always squared up with him. We think that

1902 REUNION



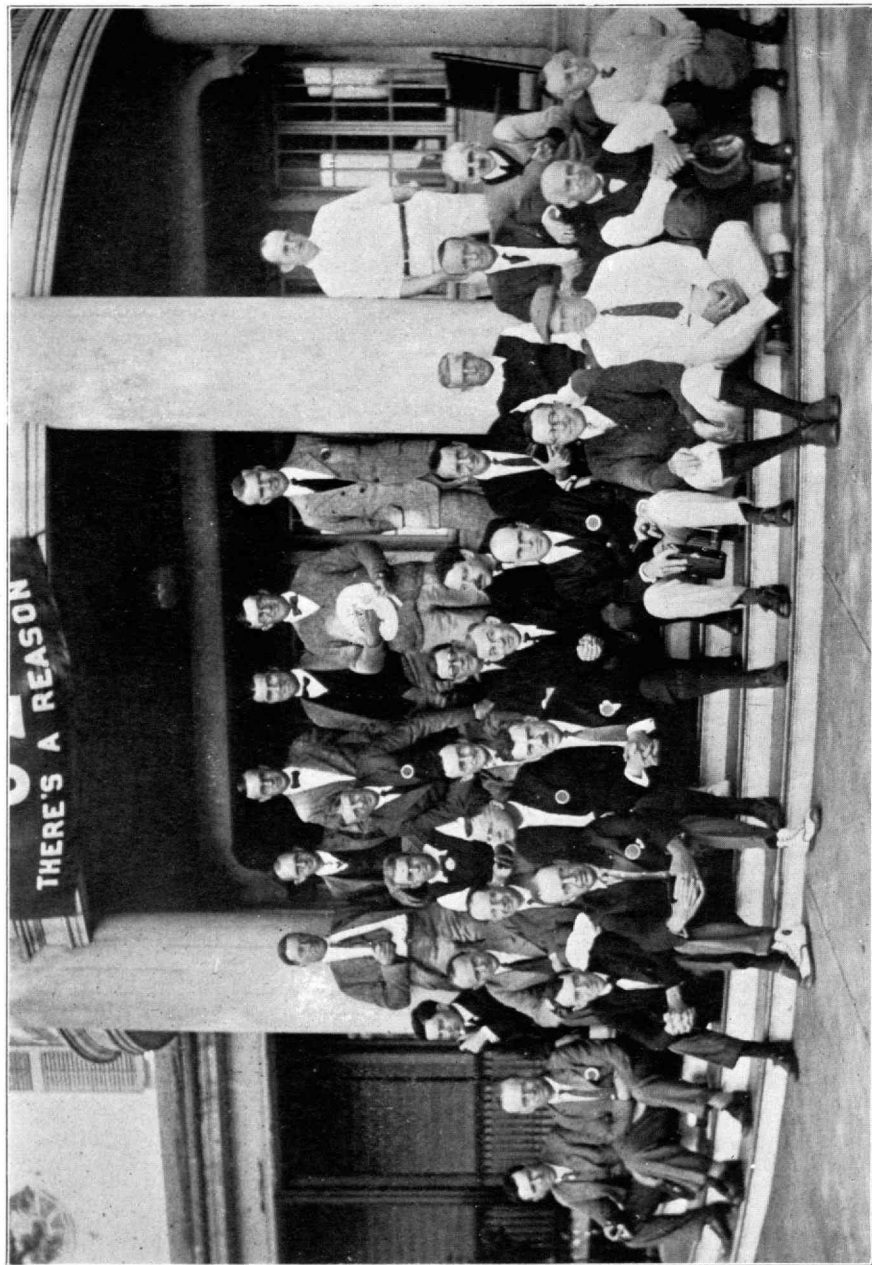
BALL TEAM FROM NEW YORK

Left to right: Franklin, Pendergast, Nash, Hathaway, Place, Fruit, Walker, Baldwin, (kneeling) Montgomery.



WINNING BALL TEAM FROM BOSTON

Left to right: Fitch, Gates, Whitney, Patch, Sherman, B. Philbrick, Walker, Collier, C. Mixter, Galaher



1902 AT RIVERSEA, JUNE 16, 1922

Top row, left to right: Borden, Robinson, Sherman, Reynolds, Whitney, Lowe, Montgomery. *Below:* Place and Nash. *Second row, left to right:* Slover, Walker, J. Philbrick, Geomannos, J. Mixt, Gates, Collier, Pendergast, Ritchie, Gahner, Hammond, Hadaway. *Lower row, left to right:* Titcomb, E. Philbrick, Patch, Hunter, Fruit, Kellogg, Sawyer, Allyn, Franklin, Taylor.

the above are two pretty weak arguments to base a claim upon. At any rate, "Ros" Davis, the new secretary of '05, is apparently of the same opinion, as he has forwarded for publication in '04 Class notes a copy of a letter from "Gunny" in answer to the effusion of Thomas, and this letter forever removes all doubt as to "Gunny's" idea of which Class he swears allegiance to. It also gives us some more news about Gunn which we are all glad to hear.

"My dear George: Thank you for the publicity in the last number of the REVIEW. Even if you were very cruel to me, however, both Mrs. Gunn and myself had a hearty laugh over your amusing letter and there is no bad feeling. I am willing to grant that '05 has some good points, but I think that the precedent is that you remain true to your first love. I trust, however, if I should attend a '05 reunion that I would not be unceremoniously evicted from the hall where are gathered so many brilliant minds, such as are to be found in the '05 roster.

I have been in Europe now since 1917 with two trips home, one of which I spent in a tuberculosis sanatorium, attempting to heal up some lesions in my lungs. I think I have been successful. It was a joke on me, as I had been working for three years with a Commission for the Prevention of Tuberculosis in France. I hope I was more successful with my work for the French than I was with myself.

What are you doing these days? Are you still connected with the sewing machine business and have you any desires to return to Russia? I am leaving next week for Poland and must visit Lemberg, Krakow, Warsaw and Wilno before returning to Prague. First of July, I and my family are moving to Paris, as my headquarters have been transferred there. However, I shall still have to come to central Europe frequently.

Mrs. Gunn and our little girl, who is now nearly six years old, are glad to move to Paris as we have been in Prague for more than a year and a half.

It seems a long time back to the days at Concord Square. I may say confidentially that I do not believe that I have eaten a baked bean since 1905. At any rate, in your letter I am glad that you stated that I refunded the money to you which I had to borrow when I was broke.

With the very best of good wishes to you and yours, coupled with the hope that I may see you sometime in a not too distant future, I am,

Yours as ever,

SELSKAR M. GUNN, "Gunny."

To '05

"I could not love thee dear so much
Loved I not Ought Four More."

Thomas, in his letter in the April issue, also states that he and Gunn roomed in the same house in Concord Square with "the notorious Volts Ovington." We have seen a great deal of comment about "Volts" but never before has he been alluded to as "notorious." Possibly Thomas' pen slipped and he meant to write "noted," which would be more accurate.

Lewis G. Gillett is now superintendent of the Ray Mine, Magdalena, Jalisco, Mexico. The following extract from a letter from Gillett seems to indicate that Magdalena, Jalisco, Mexico, is a fairly lively place:

"I had been here only a short time when I received a couple of knife thrusts which passed clear through the left forearm and laid me up for quite a while. It is much better now but it will be some time yet before it is as strong as before.

Mr. King, one of the staff, was held up on the trail coming home from the movies one night, and was brought to the house with a demand for money and guns. He spoke to me and I got my gun and climbed through the window. There were two men, one with a gun which Mr. King grabbed. The men drew knives and I pulled the trigger on an empty cylinder. Apparently I emptied it (an automatic) when I packed to come down here, but left the trigger up and the safety on. Before I could pull back the gun I was struck in the arm and lost the use of it. King took the gun away from the other man and both ran. He was stabbed in the forearm, once, and also in the back (shoulder). The men were careless in their manner of attack but were quick with the knife! It was all over before I really knew what was happening. The fact that my left arm was in the way as a protection each time was pure instinct as I can't remember the details of the fight at all."

A card has just been received announcing the fact that George E. Atkins, '04, and Paul R. Parker have entered into partnership under the title of "Atkins & Parker, Engineers" for the general practice of engineering, specializing in mechanical, marine and hydraulic engineering, including ventilation and mechanical equipment of buildings and industrial plants. Their offices are in the Hobart Building, 582 Market Street, San Francisco.

John W. Shaw is now located in Annapolis Royal, Nova Scotia.

Norman L. Snow has resigned his position as vice-president and active head of the Terry Steam Turbine Company of Hartford, Conn., the concern with which he has been connected for the past thirteen years. He has assumed the duties of president and treasurer of the Diamond Power Specialty Corporation of Detroit, Mich., a new concern which has purchased the Diamond Soot Blower business of that city. Before entering Tech, Snow graduated from the Sheffield Scientific School at Yale. Since leaving Tech, he has been continuously engaged in the power plant field.

Mert Emerson is continually adding to the positions of honor which he holds. He has recently been appointed one of the board of trustees of Wentworth Institute of Boston. He is also one of the board of trustees at Thayer Academy at Braintree, Mass. At the latter institution Mert presented the diplomas to the graduating class of this year.

"Reg" Wentworth has severed his connection with the Eveready works of the National Carbon Company, and is now with the Barrett Company, manufacturers of roofing materials, paving materials, etc. His headquarters are still in New York City.

C. H. Stebbins has concluded his efforts to sell Oldsmobiles and is now with F. A. Handlett & Son, 93 Broad Street, Boston. He is now selling iron and steel pipe, etc., instead of automobiles.

The annual reunion of the Class was held at the Wianno Club, Wianno, Mass., on June 23, 24 and 25. As has been the custom for the past few years the participants gathered at the Engineers' Club, Boston, for luncheon Friday noon, and after an hour or two, the party started for Cape Cod by automobiles. The trip down the Cape was made without incident, except that it rained part of the time. As no '04 reunion is successful without a bit of rain during some portion of it, this was accepted as a good omen. It was also the best time to have the rain as it did not interfere with the real business of the occasion.

The arrangements at the Club were the same as last year, the Class being quartered in the Tiffany Cottage which provides splendid and convenient accommodations for an occasion of this kind. Friday evening was spent in swapping yarns and reminiscences and Read, Hartshorne, Sanborn and Holcombe got in several rubbers of bridge.

Saturday was one of those beautiful Cape Cod days and the crowd took full advantage of every minute. Directly after breakfast the annual ball game was scheduled, but on attempting to make up the teams it was found that the influence of the golf enthusiasts was too great. The grand old American game went by the board and everybody played (or tried to play) golf.

The real golfers were Read, Hartshorne, Haraden and Sanborn. Herb Kalmus and Charlie Haynes were sadly missed by the real golfers this year.

The next class of golfers included Mert Emerson, Phil Sweetser, Jack Draper and "General" Holcombe, who weren't bad at all. The others who attempted to play golf (for the exercise) were Stebbins, Parker, Russell and Stevens and the less said about their game the better. They got a beautiful coat of sunburn and a fine appetite for their meals. While the crowd was at lunch Saturday, Kinsley Draper dropped in to say "hello" but was unable to remain.

Golf occupied most of the daylight hours, and Saturday evening, the annual smoke-talk was held, which lasted until a late hour.

Sunday morning more golf was played and Parker, Stebbins, Langley and Dennie played several sets of tennis. Soon after luncheon the exodus began and the departure of the secretary about four o'clock signified the official closing of the reunion of 1922.

Although there were not as many present as at the last two reunions, all present enjoyed themselves to the utmost and extended their sympathy to those unable to be there, and went away already looking forward to next June, as well as to June, 1924, when our twentieth anniversary will occur and when a big crowd is confidently expected. The long distance travelers were "General" Holcombe, from Washington and Joe Haraden from Schenectady.

Those attending the reunion were Dennie, P. S. Sweetser, M. L. Emerson, E. H. Russell, Jr., Stevens, G. W. Sanborn, Haraden, Munster, Parker, Haley, Hartshorne, Anthony, Langley, Stebbins, Read, J. H. Draper, H. K. Draper, Holcombe, Cunningham and Groves.

1905

ROSSELL DAVIS, *Secretary*, 19 Thorndike Street, Beverly, Mass.

For the benefit of those Fivers who were not present at the Class party on March 18, yes, and for some of those present as well, I wish it to be known that until I read Grove Marcy's valedictory in the April REVIEW, I was under the impression that the alleged election, perpetrated at that party, was about as serious as was Grove's arraignment. Even when I received the Class archives, a set of address cards, I did not tumble. No treasury, no constitution, no records, no properties — it could not be! But my name is above the Class notes and it would seem that I am inflicted upon the Class.

Without doubt, the secretary should be located in Boston where the fellows could get in touch with him. To overcome this difficulty and be as up and coming as the other classes, the next notes will show one or more assistant secretaries — and they will receive no advance notice.

Grove has had quite a tour of duty and if he has had enough someone else should take up the reins. There are others better fitted for this work, but I shall be glad to do what I can and only hope that I may have a small measure of the success that was Grove's. His work requires no eulogy but I take the liberty of speaking for the Class to express our earnest appreciation for all that he has done. — *Ros Davis*.

George Thomas has sent in a letter from Selskar Gunn, '04-'05, commenting upon but not denying the facts, George gave in the last notes. But as Gunny made it plain that his heart was with '04, in spite of the efforts to wean him, the letter was forwarded to the secretary of that Class.

Bertrand L. Johnson reappears, this time as full author of "Tin in 1920," United States Geological Survey. He gave us his bibliography as follows:

Tin in 1919 — See TECHNOLOGY REVIEW, April, 1922.

Tin in 1920 — Herewith.

Tin in 1921 — Coming.

Tin in 1922 — ?

Albert W. Atwood has nothing on him.

The sympathy of the Class, to the last man, will go out to Grove Marcy by reason of the death of his mother on June 5. To a number of the Class, who were fortunate enough to know her, the loss will be also personal. She had all the qualities that each one of us most admires in his own mother.

CHANGE OF ADDRESS

Walter Burns, 60 Prospect Street, Auburn, R. I.; Charles E. Leavitt, 32 Broad Street, Weymouth, Mass.; Ben E. Lindsly, Jeffries and Lindsly, Ardmore, Okla.; Elliott Lum, 773 Lincoln Avenue, St. Paul, Minn.; George C. Thomas, 15 Outlook Road, Swampscott, Mass.; Major George E. Turner, 156 Franklin Avenue, Redlands, Cal.; Robert E. Wise, 5107 Tenth Avenue, Los Angeles, Cal.

1906

J. W. KIDDER, *Secretary*, 50 Oliver Street, Boston, Mass.

E. B. ROWE, *Assistant Secretary*, 108 Water Street, Boston, Mass.

The *Electrical World* for April 29, 1922, contained an article entitled "Outlook for Wiring Supplies in Spain and South America" by P. S. Smith and A. H. Keleher, with a footnote stating the latter to be president of the A. H. Keleher Company, New York.

The secretary received a circular from Estabrook & Co., the Boston bankers, adver-

tising an issue of bonds of the Columbus Electric and Power Company. This was just about to be filed in the waste basket when the following was noted:

"From the accompanying letter of Mr. C. F. W. Wetterer, president of the company, we summarize as follows: 'The Columbus Electric and Power Company is one of the Stone & Webster properties which is located in their Southern District'" of which "Wet" is the district manager.

The previous item shows there is more than one way to get Class news. Here is another: The writer was in a conference with a New York man who inquired incidentally, if I knew Ray Barber. On being answered in the affirmative it developed that Ray is now in Burlingame, California, as a consulting mining engineer, also that he recently married Edith MacLeod. We ran across Dan Kelley the other night in Thompson's. Dan advised he had left the employ of the City of Boston and had entered the contracting business. Dan administered a mild rebuke for the lack of Class activity and assured us he will be in on the next party. Just for that we are tempted to start something. If two or three more would take the same attitude there would be no escape.

Professor Locke has been a fellow suffering Class Secretary and when he discovers a news item sends it to the Alumni Office. We are indebted to him for the following: "Mr. E. S. Bardwell of Great Falls, Montana, was recently married." The notice also states Bardwell recently made a trip east, "more of which later."

1907

BRYANT NICHOLS, *Secretary*, 2 Rowe Street, Auburndale, Mass.

HAROLD S. WONSON, *Assistant Secretary*, Care W. H. McElwain Co., Manchester, N. H.

The fifteenth year reunion of the Class was held according to schedule at West Yarmouth, Mass., from the afternoon of Friday, June 16, to the corresponding time on Sunday, June 18. Hotel Englewood, with its annex, was the headquarters and we were well taken care of by the proprietor, Mr. Morin, and his assistants. As in 1916, when we assembled at the same place, the weather was foggy and rainy most of the time but that really made little difference in the good time which the men had.

Twenty-three men of '07 sat down to the evening meal on the sixteenth, nearly all of these having motored from Boston along the beautiful south shore of Massachusetts, enjoying a splendid afternoon of sunshine and warm breezes. Two others joined the party later, and the evening was spent in the living room of the annex, with a fire in the big fireplace, playing bridge, whist and poker and interchanging experiences of personal and business activities. The entire ten rooms of the annex were occupied by our party, and about the same number of rooms in the hotel itself were necessary to take care of the rest of the bunch. Harry Moody and Oscar Starkweather had a room at the annex, and needless to say, less sleep was enjoyed by the other occupants of this building than by the more fortunate fellows who were at the hotel. Macomber was "strategically" sick one night, and completely fooled Starkweather, thereby saving himself from being dumped out of bed. We understand that Sam Marx had to suffer as a result of Mac's "illness".

Saturday morning was cloudy but free from rain and an exciting baseball game was participated in by most of the fellows. The secretary did not witness this athletic spectacle, as he and Hud Hastings went to Hyannis in a car to meet any men coming from Boston on the morning trains, but he understands that real strategy was resorted to in order to win the game. The indoor baseball was used, and on account of the high wind that was blowing, a hit that apparently was going to carry the ball well toward center field, would result in an easy fly which would land somewhere in the infield—a simple put-out. So after the first inning some wise heads on one side got together and decided to bunt every ball with the result that before their opponents woke up to what was happening, eleven runs were made, and the final score was 15 to 2.

A little tennis was enjoyed (?) by a few of the fellows, playing in a soft, sandy court, with the wind raising all kinds of antics with the ball. Bowling and billiards and cards furnished plenty of recreation for many. On Saturday afternoon a ride in a power boat for the entire crowd had been arranged, but the threatening weather and the high wind that made white caps on the water even in the inner bay, kept all from going on this

trip except Pope, MacGregor, Starkweather, Noyes, Lawrence Allen, Bryant Nichols, Small, Wires, Coupal and Hud Hastings. These ten men agreed that the two hours spent on this trip, in which every one got soaked from the salt spray, was in itself worth coming to the reunion for.

Saturday evening a Class meeting was held in the living room at which a few business matters were attended to and the secretary gave statistics and reports concerning the doings of Class members. The following Class officers were re-elected for a five-year period: President, Alexander Macomber; secretary-treasurer, Bryant Nichols; assistant secretary, Harold S. Wonson.

The matter of publishing a Class book this fall to be sold to Class members was discussed, and it was decided to wait until our twentieth year before doing anything of this kind.

Bryant Nichols, treasurer, presented the following statement:

<i>Income</i>	
Cash on hand January 1, 1916.....	\$312.22
Income on account reunion in 1916.....	561.89
Receipts from various informal dinners.....	52.00
Class dues.....	492.00
Interest.....	22.36
	<hr/>
	\$1,440.47
<i>Disbursements</i>	
June, 1916, reunion expenses.....	\$691.32
Postage and envelopes.....	85.46
Printing and mimeographing.....	91.09
Class of 1907 banner.....	23.50
Class dinners.....	84.65
Advisory Council on Athletics, M. I. T.....	50.00
Telegrams.....	2.12
Liberty Bonds.....	250.00
	<hr/>
	\$1,278.14
Cash on hand June 1, 1922.....	162.33
	<hr/>
	\$1,440.47

The returns of the salary or income slips from members of the Class enabled the secretary to give the following interesting statistics:

One hundred and six men reporting gave a total annual income of \$740,470, or an average of \$6,985 per man. If we omit the six men who reported \$20,000 or over, the aggregate of one hundred men is \$570,470, or an average of \$5,705, which is probably nearer the correct figure for the average of the whole class than the former figure. This is to be compared with an average of about \$3,200 in 1916, and of \$2,028 in 1912. The distribution of incomes as reported is as follows:

Two	under \$2,000.	One,	\$8,500.
Eight	between \$2,000 and \$2,999.	One,	9,000.
Six	between 3,000 and 3,499.	Four,	10,000.
Eight	between 3,500 and 3,999.	One,	10,240.
Nine	between 4,000 and 4,499.	Two,	12,000.
Nine	between 4,500 and 4,999.	Two,	15,000.
Thirteen	between 5,000 and 5,499.	One,	18,000.
Six	between 5,500 and 5,999.	One,	20,000.
Twelve	between 6,000 and 6,499.	Four,	25,000.
Four	between 6,500 and 6,999.	One,	50,000.
Five	between 7,000 and 7,499.		
Four	between 7,500 and 7,999.		
Two	between 8,000 and 8,499.		

Sunday, June 18, was cool and rainy. Out-of-doors activities were out of the question, and so cards and bowling occupied the attention of the fellows until dinner time and by 3 P.M. the last '07 man had left the hotel on his way home. None of this sounds very

exciting, but every man present expressed himself enthusiastically as having had a first-class time.

The following men were present for at least a portion of the reunion: Al Pope, Washington, D. C.; Chester Vose, Marion, Mass.; Byron P. Luce, Hingham, Mass.; Frank MacGregor, Wilmington, Del.; Harry Moody, Philadelphia, Penn.; Oscar Starkweather, Needham, Mass.; Prescott Nichols, Reading, Mass.; Clarence Lamont, Wellesley, Mass.; Ralph Hudson, Newton, Mass.; Dick Woodbridge, Wilmington, Del.; Nat Middleton, Concord, Mass.; John Frank, Chicago, Ill.; Gardner Prouty, Littleton, Mass.; O. L. Peabody, Norwood, Mass.; Warren Hastings, Ogdensburg, N. J.; Sam Marx, Chicago, Ill.; Alex. Macomber, Boston, Mass.; Tucky Noyes, Augusta, Me.; Hud Hastings, Wellesley, Mass.; Lawrence Allen, Manchester, N. H.; Harold Wonson, Manchester, N. H.; W. S. Wilson, Roslindale, Mass.; Bryant Nichols, Auburndale, Mass.; Bob Taylor, Atlantic, Mass.; Gilbert Small, Wayland, Mass.; Roger Gale, Reading, Mass.; W. H. Martin, Philadelphia, Pa.; Phelps Swett, Middlebury, Vt.; Don Robbins, Waban, Mass.; Stanley Wires, Wellesley Hills, Mass.; Ed Squire, Spencer, Mass.; Charlie Allen, Spencer, Mass.; Jack McMillan, New York, N. Y.; Harold Farrington, New York, N. Y.; Clif Draper, Schenectady, N. Y.; H. D. Loring, Cincinnati, Ohio; F. T. Moses, Providence, R. I. Sam Coupal of Boston, Mass. and Arizona — a total of thirty-eight.

The following facts are taken from the statistics sheets which has just been returned to the secretary:

Franklin Oliver Adams, Jr., is an architect, doing business under his own name at 510½ Franklin Street, Tampa, Florida. He has two children, a boy and a girl. In his profession he has been publicly recognized by being made president of the Florida Association of Architects and of the Tampa Association of Architects, being also a member of the American Institute of Architects and of the American Specification Institute. — Robert C. Albro is assistant general superintendent for F. T. Ley & Co., Inc., in charge of work in Springfield district. His business address is 495 Main Street, Springfield, Mass. Bob has four children, equally divided as to sex, he being one of the few '07 men who are fathers of twins. — Charles E. Allen, treasurer and general manager of Allen-Squire Co., and of Allen-Trail-Webster Co., shoe manufacturers, lives and has his factories in Spencer, Mass. Charlie also has four children, the last one arriving in 1922. — Lawrence Allen resigned from W. H. McElwain Company in November, 1921, and became sales manager of women's shoe line for F. M. Hoyt Shoe Co., Manchester, N. H. Lawrie was the same old boy at the reunion, full of "pep," said he never felt better in his life. Three fine children make home happy and lively for Lawrie and his wife. — Leon L. Allen is business agent for the school committee of the town of Brookline, Mass., his address being 12 Town Hall. He has a boy and a girl. — Ernest S. Altgelt is an irrigation and mining engineer located at 111 North Flores Street, San Antonio, Texas. He has one son, born February 13, 1922. — Henry B. Alvord is professor of civil engineering at Northeastern University, 316 Huntington Avenue, Boston, Mass. Two boys and a girl in the Alvord family help to swell the '07 grand total. — Anthony B. Arnold has been with the American Agricultural Chemical Company every since 1907 and is now their chief engineer, located at 2 Rector Street, New York City. Arnold is married but has no children.

Richard C. Ashenden is New England sales agent for the Detroit Graphite Company with his office at 101 Milk Street, Boston, Mass. He has two children. — Frederic Bachmann, like most of the other Naval Architects of the Class has gone into an entirely different line of work. He has been doing legal work along patent lines since 1907, and is now a member of the firm of Kenyon & Kenyon, patent attorneys at 61 Broadway, New York. He is a member of the bar in District of Columbia, New Jersey and New York. Bachmann lost his first wife but married again and has two daughters aged five and two. — Cecil Franklin Baker is professor and at the head of the department of architecture at Kansas State Agricultural College, Manhattan, Kansas. Married but no children. — Albert Fitch Bancroft has been very successful as a shoe manufacturer during the last seven years, being treasurer and general manager of Bancroft-Walker Company at 13 Wormwood Street, Boston, Mass. He lives in Auburndale, Mass., and has one daughter. — Clinton C. Barker is assistant engineer, County of Essex, Mass., his address being Court House, Salem, Mass. A wife but no children. — John G. Barry, our lieutenant-colonel of freshman drill days, is a mining geologist with the American Smelting and Refining Company, 1112 Mills Building, El Paso, Texas. John was married in 1920 and has a son born January 31, 1922.

In May, 1922, Walter Bigelow formed a partnership with two other men under the name of Stone, Bigelow & Tirrell at 141 Milk Street, Boston, Mass., for the practice of civil and mechanical engineering. Walter is one of our few unmarried members. — Clarence A. Bowen, a mechanical engineer with John A. Stevens, engineer, 8 Merrimack Street, Lowell, Mass. Clarence has two children, a boy and a girl. — John C. Bradley, metallurgist with American Brass Company at Waterbury, Connecticut. John has one son. — Charles R. Bragdon, now chemical director and assistant manager for Ault & Wiborg Company, varnish works, Cincinnati, Ohio, has made various improvements, both engineering and chemical, in the art of varnish making. Bragdon has three daughters ranging in all from twelve to five. — Lester W. Brock, the father of two girls and a boy, is New England sales manager for the Pneuvac Company, at Worcester, Mass. This concern deals with various electrical household devices. — Alfred Austin Brooks, whom Course II men will remember, is a testing and designing engineer with Kerr Furbush Co., Wellsville, New York. He has two children. — Harry N. Burhans has been since 1907 secretary of Burhans & Black, Inc., wholesale and retail hardware dealers, 136 North Salina Street, Syracuse, N. Y. Married but no children. — Benjamin F. Carter is a partner in the firm Vinson Brothers & Carter, electrical contractors and dealers at Phoenix, Arizona. Bennie has a son five and one-half years old. — John P. Chadwick is the general representative of the American Smelting and Refining Company in South America and is also president of "Sociedad de Minas y Fundiciones de Carrizal" (a subsidiary). His United States address is 120 Broadway, New York and foreign address Casilla 106, Valparaiso, Chile, South America. John is a single man. — E. Leon Chaffee, assistant professor of physics and electrical engineering at Harvard College and also at Radcliffe, is probably the best known member of '07 nationally and internationally on account of his work along radio lines. A recent number of the REVIEW told in some detail of his work. Chaffee has a boy and a girl.

It is now June 22 and this has to go to press. Will continue in next REVIEW.—

1908

RUDOLPH B. WEILER, *Secretary*, care the Sharples Separator Co., West Chester, Pa.

LINCOLN T. MAYO, *Assistant Secretary*, 181 Massachusetts Avenue, Boston, Mass.

We note from the Lawrence *Sun American* that Arthur Skillings has left for Seattle as junior deck officer in the United States Geodetic Survey, on a trip of several months' duration into Alaska.

Leo Loeb addressed the Providence, Rhode Island, Section American Society of Mechanical Engineers on "Problems and Economics of the Textile Power Plant," in March.

Your secretary attended the summer outing of the Technology Club of Philadelphia in June, but did not meet any '08 men there as there were none in attendance.

NEW ADDRESSES

Robert C. Albrow, 96 Garfield Street, Springfield, Mass.; Lawrence H. Allen, Silver Spring, Md.; S. Lock Davidson, care Guarantee Title and Trust Co., Wichita, Kan.; Harold E. McPhee, 50 Bancroft Place, Hopedale, Mass.; Maj. John Mather, Watertown Arsenal, Watertown, Mass.; John K. DeLoach, 52 Sterling Street, Atlanta, Ga.; Paul E. Farnald, Box 877, Tucson, Ariz.; Philip J. Hale, Port Henry, N. Y.; Percy L. Handy, 105 Pond Street, Nahant, Mass.

1909

CHARLES R. MAIN, *Secretary*, 201 Devonshire Street, Boston, Mass.

Our thirteenth reunion was no unlucky affair for those present. It was held June 16, 17 and 18 at Powder Point Hall, Duxbury, Mass., and the cottage adjoining the property

was reserved exclusively for our use. In spite of the rain which prevailed most of the time, fun was provided by indoor sports and it is rumored that "expenses" were made by a few.

The fact that it was wet outside was merely a coincidence as was also the fact that "Jim" Finnie and Fisher brought ginger ale from Pawtucket. The opening round was served by "Floss" Luscomb who converted "Art" Shaw to "Votes for Wimmen." Those who contributed largely to the entertainment were: John Davis, Cambridge; Prof. Chester Dawes, Cambridge; James I. Finnie, Pawtucket; Howard Fisher, Pawtucket; Carl Gram, Auburndale; George Haynes, Dedham; Florence Luscomb, Allston; Clarence Maynard, Cambridge; Arthur Shaw, Auburndale; Henry Spencer, Watertown; Albert Thornley, Pawtucket; Harry Whittaker, Staten Island, N. Y.; and John Willard, Wrentham, Mass.

Regrets were received from "Jack" Moses, Detroit; W. H. Jones, Watertown; T. G. Chapman, Tucson, Arizona; Ernest Curley, Lewiston, Maine; Harold McCready, New York; Lieut.-Col. C. C. Carter, West Point; E. R. Hamilton, Halifax, N. S.; H. S. Howard, Washington, D. C.; Harold Sharp, Frank Lovewell, Brookline; "Molly" Scharff, Pittsburg; H. L. Clark, Piqua, Ohio; R. B. Temple, Reading, Mass.; Allen Jones, New York; Clarence Reeds, Hartford; L. C. Shaw, Avon, Mass.

"Molly" Scharff, 704 Farmer's Bank Building, Pittsburgh, Pa., is receiving congratulations over the fact that Samuel Adler Scharff after ten months' experience as a Tech man put up a howl because dad would not take him to the reunion. — "Jack" Moses, 617 Book Building, Detroit, has issued a veiled defy to Class members, which at the first opportunity will have to be settled with the count for eighteen holes. He is sure he could make the expenses of the reunion, but none in the Class were willing to advance them, so "Jack" will have to get ready to be with us next year. — "Chick" Shaw, Avon, Mass., was due to be present to take orders for heels and soles (of rubber) but his failure to appear may result in many of the Class being out of foot for the coming year. — Mayo Dyer Hersey was married on Saturday, June 24, to Miss Frances Lester Warner of Putnam, Connecticut.

F. R. Faulkner, I, is Professor of Civil Engineering at the Nova Scotia Technical College, and a leading member of the Halifax branch of the Engineering Institute of Canada. — A. J. Barnes, VI, is equipment engineer for the Maritime Telegraph and Telephone Company, Ltd., and has supervision of the design and installation of switchboards and other inside equipment. — E. R. Hamilton, XIV, is a Stone & Webster man, and now holds the position of superintendent of gas department of the Nova Scotia Tramways and Power Company, Ltd. — E. Q. Adams was married on Wednesday, June 28, to Miss Jane Jackson Pidgeon of Washington, D. C. — John A. Willard is now with Cooley & Marvin, Boston, Mass., specializing in textile engineering. — "Dan" Belcher is the manager of the Minneapolis office of Bemis Brothers Bag Company. — Charles Camsell, XII, has been awarded the honorary degree of L.L.D. by Queens University, Kingston, Ontario.

On June 16 the secretary suffered the loss of his youngest child, Doris Woodman Main. The beautiful spray of flowers sent by the members of the Class was greatly appreciated by Mrs. Main and himself and helped a lot to make their burden lighter.

1910

DUDLEY CLAPP, *Secretary*, Jeffries Point, East Boston, Mass.

The following are the last of the autobiographies of Course XIII which V. T. H. Bien spent so much time and effort in securing. The Class appreciates Bien's efforts and has enjoyed their fruits. Here's hoping that other live wires will follow in his footsteps.

French Sargent, writes from the Worthington Pump and Machinery Corporation, 820 Old Colony Building, Chicago, Ill.:

"My story is a simple one and easily told. My connection with ship-building since leaving Tech has been slight, but marine matters will always be of interest, and my dealings with the ship-building industry on the Great Lakes during the last two years have been a source of much pleasure. It has, however, been in connection with the equipment and not the construction of the ships.

After being presented with my coveted degree, that June long ago, I spent the summer

hunting around for what looked like a good opening. For variety's sake I included a trip to the West Indies on a fruit boat, my last sea trip to date. I finally landed in the Bethlehem Steel Works as machine operator on a princely pittance, emphasis on the pittance. For two years my diet consisted mainly of cheap boarding-houses, twenty-four hour shifts, night work and overtime, resulting in a long drawn out case of typhoid fever.

For some reason however there was always with me a keen interest in Boston (she's still with me, and I trust will be with me for many years) so after recovering from the fever, I went back to Beantown and to work at the Blake-Knowles Steam Pump Works in Cambridge, one of the subsidiary members of the Worthington Corporation. A few months there were followed by a transfer to New York on engineering work connected mainly with steam condensing machinery.

Then, in 1913 I brought my Boston interest down to Manhattan. Mary Fowler of Allston, and I were married in February, 1913, took an extensive wedding trip to Providence, *en route* to New York, and set up housekeeping in a two by four apartment overlooking the Bronx. We soon moved across the Hudson to Arlington, N. J. So it went for four years. Ruth came to us in 1916, and is now a big girl. My family is not large, just the three of us, but it is a very happy family and one I am justly proud of.

Financial difficulties of the Worthington Company caused much apprehension and uncertainty, but those have passed and the Company has developed into an unusually progressive and promising organization.

In 1917, I came to Chicago. My title is just plain salesman, pump peddler, but nevertheless the work is extremely interesting, and there is ample opportunity for work too. The Worthington line includes a great variety of products, from small water pumps to big diesel oil engines, and an intimate knowledge of the full line entails continual study. Few organizations today have more prospective developments in view than this company, which alone denotes a most progressive policy.

During the past year I have purchased a home in Evanston, a suburb of Chicago and am looking forward with much pleasure to the summer joys which come to a city suburbanite.

Be sure and put my address in the circular letter, 820 Old Colony Building, Chicago, and if any of our crowd visit Chicago or vicinity, be sure and let me know.

As for the tenth reunion I have not been planning on a trip East next summer, but anything is possible, and, too, I may be far from Chicago by that time, who knows. With my very best wishes to you, Bieny, and the others who may read this letter."

From C. A. Schellens, Groton, Mass.: "After graduating I enrolled in Course II, for a graduate year and took an M.S. degree. This was the most pleasant year that I spent in Tech, as I was allowed to pick out whatever I liked in the way of studies and to come and go more or less as I pleased. I did as much work as in previous years but was entirely free from that driven feeling which was at times experienced by most of us in the undergraduate courses.

At the end of the year I signed up with Dr. S. A. Moss of the General Electric Co. at Lynn, Mass. Dr. Moss was head of what was known as the turbine research department, and carried on all manner of experiments on turbines, centrifugal compressors, pumps, etc., in fact was a sort of scientific authority in mechanical engineering at Lynn and to a large extent at Schenectady. I started in overalls at fifteen dollars per week working ten hours per day. As I was of a 'theoretical' turn of mind the doctor seemed to take a fancy to me and raised my pay and made me first assistant in a couple of months. I spent about three years with him, running various tests, examining patents, making reports and investigations. He always managed to get plenty of money for his tests and made very good ones. The doctor had a remarkable personality, in fact some people thought that he was a little queer, though I consider him one of the foremost engineers of today.

When I left the research department I was placed in charge of the main computing department and of the commercial testing. I laid out all of the machines to the customers' specifications, made steam consumption guarantees and looked after the testing. My new bosses were Mr. Richard Rice, chief engineer, and Dr. Lowenstein.

In 1915 I laid out a machine of radically new design, which lowered all previous steam consumption guarantees by a large margin and has been largely adopted as a standard since. I had a number of very good computers in the department, chief among whom was a Russian named Petrovsky, who was by far the ablest practical mathematician whom I have ever come across.

Altogether I had a very pleasant time in Lynn. I had the good fortune to board with a Mrs. Finnegan, a Scotch Irish lady from Prince Edwards Island who kept a boarding house on Ocean Street, in a most beautiful section of the town. I met R. W. Rose, M. I. T., '06, who was in charge of the cost department at G. E. Rose is a great yachtsman and we cruised together up the Maine coast during vacations. On these cruises were also Prof. C. W. Green of the electrical department, M. I. T., and his wife and Clarissa Rose, Rob's sister, who became Mrs. C. A. in 1915. Speaking of family matters I should mention that Mary Rose Schellens arrived about a month ago.

Toward the latter part of 1915 I began to be very nervous and should have stopped work then and there. I hung on, however, until the next spring, when I came down with a complete nervous break-down and had to lay off for a couple of years. I have been slowly recovering since, but have not got back one hundred per cent of my strength even now. When one has exceeded the elastic limit it is a slow job getting back again.

In the fall of 1917 I went with the Oscar Daniels Co., New York, who had leased a shipyard in Tampa, Florida, and who had contracts for ten steel ships for the E. F. C. This was Daniels' first attempt at shipbuilding, as they were a structural concern, and they had very little idea of shipyard organization, as I did myself. I was a sort of combination chief draftsman, engineer and purchasing agent. We bought all of the plans from the Texas Co. and expected to have very little designing to do, but the E. F. C. insisted on so many changes that there was considerable. Though I ordered all the steel for the ships and a good part of the machinery with the help of one draftsman, I did not appear to be making much of a hit and left them after three months.

I then signed up for the Fourth Officers Training School at the Naval Academy and got an Ensign's Commission in the United States Navy. In the fall of 1918 I was detailed to the transport *Montana* as junior watch officer in the engine room. I got some pretty fair marine experience here as we lay in Hoboken for three months undergoing a complete overhaul. I resigned my commission after the armistice was signed and was discharged early in 1919 after having made one trip to Bordeaux.

I was then offered a job as assistant to general superintendent in the Groton Iron Works and have been here since. This is a fine shipyard in a fine location. We have delivered six 8800 ton D. W. ships since last spring and have three others which are to go this summer. Due to financial difficulties which you have no doubt read about in the papers, we have as yet received no contracts from private concerns, but are hoping for the best.

For my next attempt I am going to follow your example, Bien, and am going out for myself, though I have as yet worked out no detailed scheme. My permanent address is Clifton, Mass."

George S. Thomas, 106 Union Avenue, Bala, Penn., wrote as follows: "This idea of a Class letter is a very commendable one and let us hope that from time to time it will be repeated. Many times have I wondered what all of you might be doing and where you were and this is about as good a way of knowing as occurs to mind. Out of our entire bunch that left the Stute in 1910, I have since seen but three, and they all within the last two years; Geary, Chapin and Holbrook. I hope that all of us can be in Boston next June for the reunion and have a big time together.

About six weeks before Commencement, in June, 1910, I had landed a job with the Maryland Steel Co., marine department, at Sparrow's Point, Md., and so after Prexy's parting blessing and the sheepskin I was very soon on my way to start in and get on the receiving end of a payroll. My job was assistant to the engine estimator, and in that size of a drawing room it included a great variety of work from figuring weights of piping to detail drawing of anything, or taking data or indicating cards on trial trips. It was mighty good all round experience and lasted until I got something better. Something better in this case proved to be a job at the same kind of work but with more responsibility with a bigger firm, Cramps. I had started in at Sparrow's Point at twelve dollars a week but got a raise shortly and did fairly well for a detail man or assistant.

When the time came when I thought I ought to get a promotion, there was none vacant there, so I looked elsewhere and found Cramps in need of an engine estimator, and Newport News wanting a detail draftsman. Having looked over the two places I decided in favor of Cramps. I had started in at Sparrow's Point on this sort of work, as before mentioned, and decided that it offered more responsibilities than the drafting and came more directly under the eye of the big boss. This job turned out well for the business as it was organized

at that time and as time went on and I got more experience, more and more things were left to me and I felt that things were coming along steadily even if slowly.

Along about the beginning of 1915, I had a chance to go out West with my father, who had been wanting me to consider business for some time. He had looked over the prospects in shipbuilding and we had discussed it from several angles and decided that as affairs then stood (shipbuilding being none too rosy even in that day) that there was no great future in the business without the intervention of some good turn of luck. He had been in the retail lumber business in Iowa for many years with a strong retail line yard concern and offered me a berth as his assistant which held very good prospects for a good position later on. It was very appealing. Shortly after I developed a spell of homesickness, and decided to accept his proposition.

We moved out to Iowa in the month of June, 1915, and I went into the lumber yard to learn the business of retailing lumber to the farmer and the carpenter. It was a good combination of indoor and outdoor work and developed the brawn and the brain at the same time although not of any particular value as engineering experience, except possibly one feature. There was built a new lumber shed at one of the yards and I was asked to act as architect for the company. At another place the whole yard was rebuilt and redesigned and I was given charge of that job almost entirely. Part of the time I was on the road going about to the different yards and acting as assistant auditor.

After being on this job for about a year the war began to change the outlook in shipbuilding and I began to see that that business would shortly be an entirely different proposition than when I left it. However, going out of it, I determined to forget it and saw wood where I was. This was my attitude until after we got into the war and the question of war work came along. We heard many and various reports about the great need of men with experience in shipbuilding and when the Shipbuilding Board and Emergency Fleet Corporation were formed, the demand became even greater for trained naval architects and marine engineers. At this point a family council was held and it was determined that I should go to Washington, and, armed with letters of introduction to Mr. E. N. Hurley, to look up some sort of a job where my experience would be of service to the government in the great emergency. This was done. Seeing Mr. Hurley proved a difficult and impossible task, but getting a job was easy. In fact it proved impossible to escape it after they learned about the 'Tech' diploma. I had come away expecting to be gone four days but they kept me on the job for three months before granting leave to go back home and get my family ready for moving to Washington. In the meantime a little son had been born and this increased the difficulties of winter time moving. Houses in Washington were scarce and rents outrageously high, but through friends we found a house near them in Kensington, Maryland, near by, and moved therein in January, 1918, during the worst weather of the most severe winter suffered in that region for many years. This was going in for war work with a vengeance but we got settled and remained there while the Emergency Fleet Corporation was in Washington.

My work with the Fleet Corporation was in the technical division scientific branch, assistant to A. J. C. Robertson, a Scotchman who was assistant to the Naval Architect, Mr. Theodore E. Ferris. I did scientific hull work and found both of these gentlemen very pleasant to work with and had the pleasure of learning many useful things about hull resistance from the most modern experiments and methods in use.

When Mr. Schwab became director general of the Fleet Corporation and announced forthwith that it would move to Philadelphia, it meant a great deal of confusion to a lot of us who had just recently gotten settled but we all saw that it was a step in the right direction. For war work could not last forever and when it was over most of us would be in need of some sort of useful work and some of us might prefer it along the same line provided the conditions remained somewhere near the same as the great war demand had created. Matters turned out very fortunately for us. It so happened that I had called at Cramp's office while on my way to Washington and so they knew where I was and what I was doing.

During the epidemic or the 'flu' which hit Philadelphia so hard that following fall, some of the men were hard hit and one of them an old friend of mine, died from the effects of it. This man was a Tech graduate in 1902 and had been an assistant to the chief engineer in various capacities almost ever since. During my previous work there I had assisted him in estimating and various scientific calculating and had come to regard his job as a good thing. After the first few days, therefore, what could be more natural than that there

should be a mutual getting together of employer and employee. And that is exactly what happened.

At present my share of the work consists in going on all trial trips and working up and keeping track of all the data and computing connected with that and also I draw, and help figure the propellers that are designed and made here. There are other items occasionally that require figuring on and I get my hand in on that too.

We have only recently moved into a new office building that makes our work here very delightful and is the more especially noticed because the old one was especially hideous.

Our family statistics are asked for also. Was married to Miss Bessie Lee at Sparrow's Point in September, 1911, and have three children, Jean Miller Thomas, aged seven years, her sister, Priscilla Lee Thomas aged five years and the brother mentioned before, George Wilbur Thomas, who was two years old last Thanksgiving day. We have established our home here in Bala and find it a pleasant place to live in. Should any of you be in Philadelphia, with spare time enough to run out to Bala I shall be delighted to welcome you to our home and happy family.

Hoping to see every man in our Class and course at the reunion next June."

The following letter was written by A. Hadji-Savva, I, to the president of the Institute and given to the secretary for publication in the class notes.

"I am one of your graduates in the department of civil engineering, 1910, who with many of my compatriots have at various epochs, crossed the Atlantic in order to receive the lights of American civilization and humanism.

When I left my home in Asia Minor in the year of 1907 and took the way to Boston, darkness was reigning there in the domain of scientific knowledge and principles of humanity, and I hoped to be one of the pioneers, as Ottoman Greeks have always striven to and succeeded in becoming such, during the period preceding the Young Turk Revolution of 1908.

On my return to Constantinople in 1910, year of my graduation, it became evident that the Turk had no sympathy for my race and that his admiration during the past, for the representatives of a higher race, which is the Greek race, had been converted into jealousy to a degree excluding all possibility of collaboration with him.

Hence, after seven months' service in the Turkish Ministry of Public Works, I was let to understand that 'new ideas was the exclusive privilege' of the Young Turks and non-Turkish races had better look elsewhere for a fertile ground to cultivate theirs.

I left for Egypt early in 1911, and was engaged as assistant engineer in the Egyptian State Railways until 1920, when I resigned and accepted the post of chief engineer in the Thessalian Railways at Volo.

I am writing to you from Volo, where I am living among Greeks, free Greeks, the only member left of my family who have always been slaves in the hands of the "almighty" Turk who were at the mercy of the "barbarous" Turk, fighting for their lives during the last seven years, and who, according to news just received from friends at Constantinople, have all been hanged, stabbed or shot, or violated by the criminal Kemalist Turk.

I am not going to dwell on details and what I shall relate hereunder is inferior to what others more unfortunate than myself will have to tell you.

In 1914 when the war broke out, I had my father, four brothers and one sister. Today I have no father, no brothers and no sister, my brothers being murdered and my sister violated by the policeman leading her to exile, and subsequently murdered by him on the mountains of Asia Minor. My father, seventy-nine years old died, because, I think, he could not do otherwise, after such a heavy loss of blood from the veins of his own children. Three of my brothers were stabbed or shot, while the fourth one was hanged in public at Amassia, a city of the interior, as a common criminal.

I shall not add to the list two of my uncles hanged in public, my aunts violated and subsequently murdered by officials who had received secret orders to do what they did. My grandmother, eighty-two years of age, was also sent to exile and her fate is unknown.

Europeans are perfectly aware of what is going on at this moment in Pontus (Black Sea), but they do not like to be engaged in a talk to you on such unpleasant subjects as I am doing now. Americans, on the contrary, are too far away to hear of such things, although I am sure that if they ever did hear, they would gladly let themselves be led by their conscience.

With this conviction I request you, the President of my Alma Mater, to make known to the American public that horrible crimes are being perpetrated on the coast of the Black

Sea and especially in the Province of Trebizound comprising the cities of Baffra, Samsoun, Sinope, Alatsam and others.

When you will do this you shall have given all the protection you possibly can to a man who thinks and acts as you do, because he learned from you to think and act as he does. We shall then both wait and follow the evolution in the American public opinion, sure for a result, a result which will and must send the Turks to the plains of Central Asia, — cursed by God and men — to the plains from where selfish Europe has brought them and where it is now the duty of young America to send them back again. May God help her!

My hearty greetings to Professors Spofford, Porter, Allen and Hosmer, who loved me so much and to whom I owe much for their love and their fatherly interest in my advancement and welfare. I do not know if they are still there, as I also do not know if the president to whom I am addressing this my appeal is President Maclaurin, the man with the iron will, as we called him, but it should not matter — I loved the Massachusetts Institute of Technology, the Tech as we so dearly called it.

I am greeting the Tech that you represent in the hearts of those who are with you now, and of those who are gone, but whose hearts are still with you.

1911

ORVILLE B. DENISON, *Secretary*, 63 Sidney Street, Cambridge 39, Mass.

JOHN A. HERLIHY, *Assistant Secretary*, 588 Riverside Avenue, Medford 55, Mass.

'Tis a sad story, mates, but pity 'tis, 'tis true. Read 'em and weep:

1911'ers subscribing for Class Book. 55
Disinterested Majority. 385

Faced with this unprecedented demonstration of lack of interest and implied dissuasion your Eleven Year Book Committee had no alternative than to cancel publication. Accordingly the two hundred or so questionnaires received will be placed on file and the money sent in by the faithful returned. Rest in Peace!

Be not afraid, however, the temporarily dormant Spirit of 1911 will without doubt come back to life 'ere long and again we will take our place among the leaders of the alumni! In the meantime: W. T. D.

Here is a clipping from *The Tech* of May 8:

"Mr. and Mrs. G. Fred Lyon of Danbury, Connecticut, recently announced the engagement of their daughter, Marion, to W. T. Jones, '11, of Norfolk, Virginia. The announcement was made at a tea and reception given at her home for their intimate friends. Miss Lyon graduated at the Danbury High School and at the Connecticut College in the class of 1921. She is now a member of the faculty of Drew Seminary, Carmel, New York. Mr. Jones is a graduate of the Virginia Polytechnic Institute, and of Course II of the Institute. He was employed as assistant to engineer of tests in the laboratories of the New York, New Haven and Hartford Railroad Co.."

Hearty congratulations, Mr. and Mrs. Jones! — Mr. and Mrs. Stacy C. Bates announce the arrival of a daughter, Charlotte, February 13, weight eight pounds and ten ounces. Our heartiest congratulations!

A most successful Class dinner was held at Walker Memorial on the evening of May 2. We had as our guest Professor Miller, head of the department of mechanical engineering, who gave a splendid talk on the advances made and the present work of the department which he so ably heads. Afterwards the party adjourned to the bowling alleys, where Haines's Hustlers socked Leary's Lizards three to one, the time Wood's Wranglers holding Clark's Clerks to a two to two no decision. The scores:

HAINES'S HUSTLERS 3					WOOD'S WRANGLERS 2				
	1	2	3	Total		1	2	3	Total
Denison	60	57	68	185	F. A. Wood	77	85	91	253
Herlihy	78	79	75	232	Gardner	71	86	79	236
Haines	84	75	57	216	Bogdasarian	66	64	64	194
Average	62	67	69	198	Cumings	81	77	101	259
Totals	284	278	269	831	Totals	295	312	335	942

LEARY'S LIZARDS 1

	1	2	3	Total
Whitcomb	62	52	60	174
Leary	73	88	70	231
Haslam	50	54	76	180
Van Tassel	64	73	69	206

Totals	249	267	275	791
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CLARK'S CLERKS

	1	2	3	Total
Smith	69	62	74	205
Stewart	75	72	95	242
Comstock	84	69	76	229
Clark	73	79	91	243

Totals	301	282	336	919
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Rolling the only century string of the evening, George Cumings ran away with the highest single, 101, and the highest total, 259

Over the seventeenth of June — Bunker Hill Day — we had a week-end party at the Mayflower Inn, Plymouth, the scene of last year's most successful ten-year reunion of 1911 and this year's similar get-together of 1912. The following attended: Mr. and Mrs. J. C. Fuller, Mr. and Mrs. Thomas H. Haines, Mr. and Mrs. W. J. Seligman, Oberlin S. Clark, George B. Cumings and E. D. Van Tassel, Jr. Under the leadership of Tommie. Haines the party was kept moving all day Saturday, Saturday evening and all day Sunday. Through the courtesy of Fritz Shepard, '12, and his mates the 1911 party mingled freely with the 1912 stunts, including the ball game Saturday morning, beach sports Saturday afternoon, dancing Saturday evening, and special stunts Saturday morning.

Who do you suppose "dropped in" on the secretary early in April? Our old friend, J. D. Mackenzie, down on a trip from Canada. Same old Mac and just as full of cheer and optimism as ever. — Charlie Barker is no longer a member of the Fryer-Barker Company, consulting engineers, and is now connected with the Los Angeles office of the B. F. Sturtevant Company. Look out for those awful people in Hollywood, Charlie! — G. Arthur Brown joined forces May 1 with the Calco Dye and Chemical Company at Bound Brook, New Jersey, in their department that sells dyes to the leather and blacking trade. He is in charge of one of the three sections of their laboratory service. He sent hearty greetings to his classmates. — The following from the *Belmont Citizen* of June 17 may be of interest:

Mr. and Mrs. Orville B. Denison and family have moved from 10 Townsend Road to their new home at 32 Reed Street, Lexington."

And of course the latchstring is always out for '11ers! — Henry F. Dolliver and family have also left Belmont, Henry having severed his connection with Aberthaw Construction Company to join Lewis A. Miller, Building Contractor, of Meriden, Conn. — C. P. Eldred writes from Troy that he has resigned as professor of electrical engineering at Rensselaer Polytechnic Institute and has accepted a position with the John A. Manning Paper Company and the Manning Abrasive Company at Green Island, New York.

Now all together, boys and girls, let's start anew in the fall and put 1911 back at the top of the pile!

CHANGES OF ADDRESS

Cedric S. Anderson, R. F. D., Library, Penn.; John L. Bagg, 89 Lexington Avenue, Holyoke, Mass.; Charles M. Barker, 411 Hollingsworth Building, Los Angeles, Cal.; Arthur E. Bradley, 502 Garfield Building, Cleveland, Ohio; G. Arthur Brown, Bound Brook, N. J.; Ethan A. Collier, 537 Lincoln Street, Eugene, Ore.; M. M. Cory, University Club, San Diego, Cal.; Harold M. Davis, Lowell Road, Nashua, N. H.; H. F. Dolliver, 815 Broad Street, Meriden, Conn.; J. Howard Dunlap, 452 Fernwood Drive, Akron, Ohio; Charles Edward, Jr., United American Lines, Inc., Passenger Dept., 39 Broadway, New York City, N. Y.; John C. Firmin, 23 Warder Building, Washington, D. C.; Joseph C. Fuller, care of Northern Industrial Chemical Company, 11 Elkins Street, Boston, Mass.; Maj. D. P. Gaillard, Jacksonville, Tenn.; Walter H. Hildebrand, 934 North Avenue, Chicago, Ill.; C. R. Johnson, Box 227, Hudson, Ohio; Beardsley Lawrence, Box 267, Sharon, Mass.; Stanley H. Lawton, 985 Charles River Road, Cambridge, Mass.; J. Barton Nealey, 166 25th Street, Elmhurst, L. I., N. Y.; Theodorus Polhemus, 7 Tunstall Place, Ferguson, Mo.; F. M. Stibbs, 177 Farmington Avenue, Waterbury, Conn.; Walter P. Welch, care of Combustion Engineering Corporation, 43 Broad Street, New York City, N. Y.; Ens. Robert O. Wood, 551 Jefferson Avenue, Elizabeth, N. J.

NO ADDRESS AT PRESENT

If you know where any of these men are, please write to Dennie:

R. E. Anderson, III; Arthur E. Bradley, I; Antonio C. Clavell, V; M. W. Hopkins, I;

Edward Kennedy, III; E. A. Nash, I; Benjamin Robinson, IV; W. Y. Stamper, Jr. I; W. J. Wilson, I.

1912

F. J. SHEPARD, JR., *Secretary*, 561 East First Street, Boston, Mass.

The roads led to Plymouth and the Mayflower Inn on June 16, and those of the Class who could set off in gay spirits. It is hoped that a full account of the reunion will be appended to this letter if the same can be forwarded to the editor in time.

Johnnie Hargrave, VI, writes from Cincinnati that he is still making tools under the name of the Cincinnati Tool Company. John rates as president which seems to show that he is responsible for the quality. — W. B. Schmiedeke, I, writes he is with the Big 4 Railroad, and is the proud father of a ten-months-old red-headed boy. His home address is 74 Lunley Avenue, Fort Thomas, Ky. — J. M. Costmer, I, is the proud father of a son four and one-half months old who tipped the scales at eighteen pounds. The climate at 117 North McDowell Street, Raleigh, North Carolina, seems to agree with the younger generation. — Joe Fish, VI, is now in Europe on business. — Albion R. Davis, II, has left the H. A. Johnson Company, Boston, and is at present associated with the Baker Goodyear Company, First National Bank Building, New Haven, Connecticut, as supervisor. Baker Goodyear are an old, established firm of industrial engineers and accountants, and Davis is to be congratulated on making the connection. Last winter before the National Association of cost accountants Davis gave a talk on inventory control which gained favorable comment from the press. — Vincent L. Gallagher, VI, was promoted on April 27, from manager of the business development department of American Eagle Fire Insurance, Continental Fire Insurance, Fidelity Phoenix Fire Insurance Company, to office of assistant secretary of the same companies. Be sure to get in touch with Gallagher before having a fire as he can probably help you. — Harry F. Ferguson, XI, who is now chief sanitary engineer of the Department of Public Health, State of Illinois, located at Springfield, Illinois, was in the east during the first two weeks in June but could not remain over for the reunion. He receives our sympathy. — Roger A. Davis, X, writes in from 803 Main Street, Hartford, Connecticut, that he cannot be with us at the reunion. Davis is now an attorney at law, and the proud father of three lusty boys. — A. F. Allen, XI, is now assistant sanitary engineer, of the United States Public Health Service Sanitary District No. 5, located at 565 St. Charles Street, New Orleans, Louisiana. — E. T. Marceau, X, is at present on a business trip in Chicago and St. Louis, making it impossible for him to be with us at the reunion.

Ken Cartwright, II, after being two years in the navy during the war is now assistant to the engineer of tests in charge of the Mechanical Division of the New York, New Haven and Hartford Railroad located at New Haven, Connecticut. His work includes locomotive and power plant tests as well as all sorts of tests on small tools and machinery used in the shop. He is attending the American Railway Association convention at Atlantic City June 14 to 21, and can find no way to get to Plymouth. — John A. Allan, XII, who is now professor of geology, University of Alberta, Edmonton, Alberta, Canada, is at present somewhere in the vicinity of the sixtieth parallel of latitude on geological survey work. Allan had the kindness to forward your secretary the Third Annual Report on the Mineral Resources of Alberta which he worked up during the summer of 1921. This is a seventy-page report illustrated with photographs and maps of the "geology of Drumheller Coalfield, Alberta." This is the third in a series of reports which have come out in the past three years from work carried on by Professor Allan. — Maj. H. F. Clark, I, of the Military Science Department at the Institute was ordered to Washington on June for indefinite duty.

A pleasant "get acquainted" party was held at the residence of F. J. Shepard, Auburndale, on the evening of June 2. The following were present:

Mr. and Mrs. E. C. Morrow, Mr. and Mrs. Carl Somers, Mr. and Mrs. R. F. Symonds, Mr. and Mrs. J. E. Whittlesey, Mr. and Mrs. J. W. Raymond, Jr., Mr. and Mrs. J. M. Pettingell, Mr. and Mrs. V. G. Sloan. The time was passed playing cards and in laying plans for the reunion.

It is with deep regret that we announce the death of L. H. Goodwin, Course III, who passed away May 31 at Rutherford, New Jersey.

1913

F. D. MURDOCK, *Secretary*, 230 Chandler Street, Buffalo, N. Y.

R. CHARLES THOMPSON, *Assistant Secretary*, 26 Cedar Street, Watertown, Mass.

Remember, boys, the circus is coming next year. We shall hold our tenth year reunion in June. Charlie Thompson and an able committee are giving considerable thought to the preparation of details. Your part is to plan to have the time and means to be present. The tenth year reunion is truly the greatest opportunity. We are still young enough to have a real time, and we ought to have collected by that time the means to take us to Boston for a few days. This may seem like preaching, but I can't harp too much on the idea that you must start to lay your plans now if you are not going to let anything interfere with your enjoyment of our big time in Boston next June.

In April, Charlie Thompson got together a few loyal classmates for a frolic at Walker. Those present were Nelson, Ready, Pardey, Horsch, Pendleton, Glancy, Parket, Parsons, Bryant, Wright, Clark and Peck. On May 8 the fellows around Boston had another "get together." All this is in line with Charlie Thompson's propaganda to work up spirit for the tenth year reunion.

E. L. Bray is established in Philadelphia and extends an invitation to Philadelphia men to come out and use his tennis court. — C. L. Burdick notes: "Have been to Chile three times in the last year and am getting to be quite a traveler if not much of a sailor." — Allen G. Waite, 3d, is, or was, in Buffalo with the Dunlap Tire and Rubber Corporation. — J. A. Summerville states: "Am still in Boston working with Stone & Webster, 147 Milk Street, Boston, Mass., as assistant electrical engineer. Have one youngster almost three years old. Am saving up for his course at the Stute. — H. M. Rand, I, finds the grocery business still good. — F. H. Pendleton writes that he is hoping for a real time next year. He'll get it.

A. H. Clark is still with the United States Rubber Co. — Barbara Corinne Nelson was presented to A. P. Nelson on August 28, 1921. — Capt. E. C. Gere is back in Syracuse, New York. — A. E. Burnham is a bond salesman with S. W. Straus & Company, Fifth Avenue at 46th Street, New York. — R. K. Wright, VI, is electrical engineer at the Baldwin Locomotive Works.

Read C. W. Gotherman's interesting letter: "I think that the Class notes are one of the most interesting sections of the REVIEW. It is always the first part I look into, it enables one to keep in general touch with the rest and has been the direct cause of my meeting several of the fellows lately who otherwise would never have been found in the "big town." For my part I am still purchasing agent for the Mones at Goldwyn and have not yet succeeded in being able to wiggle my ears, walk pigeon-toed, or look cross-eyed sufficiently well to compete with the present competent exponents of such art. And I am too sun shy to portray Weller. My goggles might fit me for Harold Lloyd's parts, but then I am not handy with the ladies. So there is no hope of my being on the screen or getting front page notoriety. I am perfectly happy in leading a business man's life and spending my spare time with Mrs. G., who until December 1, 1921, was Virginia McNair Wills. With Will Hay's assistance, yours for clean pictures and better pictures."

We were glad to have the following from Arthur Kenney: "I'm sorry to say that through mistake I threw your card about Class notes into the wastepaper basket. I hasten to add that I am intensely interested in Class notes — always have been in fact. For myself, however, I have little to report. I am living at the same address with the same wife and have the same job. I have the same baby, but can report that he has acquired two teeth since you heard from him last. I guess that's the most important news I have. Plans are being made for a wonderful garden this year, but nothing much can be said to be accomplished yet. How are your famous hens, by the way?"

George A. Richter writes: "I am still pursuing my research endeavors with the Brown Company at Berlin, N. H. I returned to continue my work with this concern at the close of the war, and since that time we have succeeded in building up a rather strong and stable research organization. There are a number of Tech men interested in this work and we feel that we are making progress. I take occasional trips to Boston but I was not fortunate enough to reach there at the time of the last big Tech reunion. Occasionally Tech men come through this vicinity, either on business or for pleasure. I met a number of Tech graduates during the winter carnival staged here in February. You undoubtedly know that Berlin, N. H., succeeded in setting up a New England long

distance jump of 158½ feet at the Brattleboro Carnival. I wish to take this opportunity to extend a cordial invitation to our classmates, hoping that they will visit our place of business should they be fortunate enough to spend part of their summer vacation in the vicinity of the White Mountains. We feel that we have research equipment and man power equal to any industrial concern in the New England states and are naturally somewhat proud of our institution."

We have the wedding announcement of Ed Pratt, I, to Miss Merle Marian Fraes. We congratulate Ed and wish his bride happiness.

"Dr. and Mrs. Thomas Elmer Roberts announce the marriage of their daughter Esther to Mr. John Blatchford, III, on Friday, the twelfth of May, Nineteen hundred and twenty-two, Oak Park, Illinois."

Here is an interesting letter from F. H. Achard: "I 'fess that I have been at fault in not giving news as well as receiving it. Here's a book to make up for it. I joined up with Angus in Calcutta in 1919 and landed there after a two months' trip through the Far East in February, 1920. I started in on maintenance work there (electrical) in the machine shops, finally having charge of this work. Also the company was expanding the plant and I was in charge of the electrical end of the extension. The whole work involved 220 volt D. C., operating a final connected load of 1800 H. P. In order to give instructions to the workmen I had to learn a sort of bastard Benjali Undu, which, combined with a few English terms, comprised the Lingua Franca of the shops. Also the patience of Job was necessary in dealing with the "Mistries" as they are called. Several men are there (Tech men) but none others from '13. Most of the folks live in a compound about seventeen miles from Calcutta which makes it pleasant and handy for the works.

Of course you received the announcement of Francis H., Jr. He's a fine boy now — quite intelligent enough to uphold the honor of the Class. We have come back from India for good now and expect to connect up with a maintenance or power job."

In the *Boston Evening Record* in March was published the picture of an electrical wheel chair which was invented by L. L. Custer. — Fred O. Stillman notes: "Have been on metallurgical research for six years but owing to slackness of that line of work, I am now starting at the bottom in copper smelting."

We have had so little scandal in this column that we are glad that J. W. Brooks Ladd, I, has furnished us some material. He has become famous as the defendant in a breach of promise suit for \$50,000. Miss Ethel J. French is the plaintiff. — Kenneth Reed notes: "Have succeeded in sticking with the same company through all this readjustment. Now have a daughter fifteen months old." — H. M. Lawrence, III, hopes to make the reunion next June from Alaska. That is the proper spirit. — A. L. Kocher is contributing a series of articles on early architecture of Pennsylvania to the *Architectural Record*. — Frederick Kennedy, Jr., is living a well rounded life. He notes: "Married, built a home, practising architecture and enjoying life generally." — W. F. Wallis is at present in Peru, S. A., engaged in constructing an observatory for the Carnegie Institution of Washington, Department of Terrestrial Magnetism. — George A. Taylor is now junior partner with W. F. Taylor & Son, Lawrence, Mass. They make doors, sashes, etc.

G. E. Leavitt, Jr., notes: "Am kept very busy in these days at minimum organizations, but am getting along well and am well satisfied with my lot. My wife and two youngsters are and have been well and happy so why should I be kicking?" — From Larry Hart we hear: "Just returned from a month's trip west. Salt Lake City, Pocatello, Boise, Colorado Springs, Pueblo. I enjoy very much the 1913 Class Notes in each issue of the REVIEW." — F. D. Morse, I, is in the engineering department of the Santa Fé at Topeka, Kansas. — W. Herbert has a boy two and one-half years old.

It is with deep regret that we print the news of the death of Earl Ganser, shortly after we heard from him. He was then busy designing a new bridge over the Mississippi. His wife wrote us that he had died following an operation for appendicitis.

H. E. Crawford is chief architect for Tum-A-Lum Lumber Company at Walla Walla, Washington, supplying plans and materials for fifty towns in eastern Oregon and Washington. — The prize Class "papa" is Rusty Sage. His fourth child, Barbara, was born December 4, 1921. — W. H. Torry is with The Merrill Electric Supply Company of Worcester. — George R. Bartlett, III, has left research work and is now teaching in Batin High School, Elizabeth, N. J. — Walter Muther, I, notes: "Am trying to make a living in the printing business but don't believe it can be done. Doing time as president and general manager of the Bankers and Manufacturers Records, Inc." — L. F. Hoyt, V,

has a second daughter, Ann, born February 10, this year. — C. Harold Hopkins at Woodland, Calif., is still having pumping plants, new buildings, fences, roads, grain elevators, crops, livestock and a thousand other things three times a day.

The secretary had the pleasure of visiting for a day Gene Macdonald, who is living in Walkerville, Ontario, and is working for the Canadian Bridge Company on the design of a two million dollar bridge for Australia. If this company is the successful bidder, Gene expects to go to Australia for several years. He has a very cute daughter. — Ross Sampson has had a promotion with the Lumen Bearing Company. He has been appointed to take charge of their Chicago office. Ross has been very active in Technology affairs in Buffalo and he will be missed. — R. Rankin, VI, is now a partner in the Ellicott Tire and Service Company of Buffalo. He likes his new connection and appears to be enjoying life generally.

Robert A. Leshner notes: "The United States Government has been asked to purchase the Cape Cod Canal. I have been engaged with the Army Engineers in analyzing the case to determine if the Government should acquire it; if so, how much should be paid for it; and, if purchased, in what way can it be improved?" — We regret that L. A. Bevan has had the misfortune to have been confined in a hospital for a month. — Before Ed Pratt was married we had this note from him: "Just returned today from a visit to Cuba. Jose Cadenas joined me and my friends at dinner one evening in a dandy Havana restaurant. Roulette, racing, whiskey. Cuba is free indeed. Bet it becomes the playground of America." — Bob Bonney, X, writes: "The 'Gold Seal' business is rushing. All the Congoleum Company's congoeum and linoleum factories are working one hundred per cent capacity. So am I. About two or three 1913 men were at the 'Grand Ball' of the Tech Club of Philadelphia last month." — H. J. Von Rosenberg: "is still plugging, the depression pinched a bit, but there is light to be seen ahead." — Halsey Elwell has gone to Los Angeles for the Netleton Shoe Company. — Twink Starr is still busy with the Ferro Concrete Construction Company, Cincinnati, Ohio. — On March 15, Hap Peck states that he started a letter to the secretary but apparently he hasn't been able to finish it yet. Hap surely must be a busy man.

Mayo Tolman notes: "I cannot say that the matter does concern me, but it most certainly interests me and I sincerely hope everyone will do his part to make up the notes. I won't give you anything about myself now as no one would be interested in the heavy sledding I have had since I busted my head last May for a total of seventeen and one-half inches. However, I am still horseback riding as much as ever." — Bill Kay is: "still president of the United Vegetable Oil Refining, Inc., and is hoping for better business conditions throughout the world. Unmarried and reasonably happy. Still have mustache." — Sam Knight says: "Still fighting a bunch of white faces for a living. Nothing new except that my normal state is sober these days."

Tom Lough is a consistent performer of the benefit of these notes. He comes through with the following: "Like the birds when spring comes I migrate, only unlike them I never go in the same direction. I am now located at Jefferson City, Missouri and my new position is that of highway engineer with the United States Bureau of Public Roads. Besides myself there are three other Federal engineers in this office. We cover the entire state of Missouri and must inspect monthly each of the Federal Aid Highway projects in this State. So it looks like a busy summer. I severed my connections with the Iowa Highway Commission on April 6 to accept my present position. Inasmuch as little hard surfacing is contemplated in Iowa during the next year or so, I feel sure that I made a change for the better. My present work is interesting as well as instructive. Best of all I now have permanent headquarters and can settle down as nearly as a civil engineer ever can."

Norman Clark is assistant manager and chemist of the Whitman Manufacturing Co. — Allen Brewer contributes the letter following under his own letterhead which prints his qualifications as follows: "Assoc. Mem. Am. Soc. M. E., Licensed Marine Engineer, Grad. Mass. Inst. of Tech., Grad. U. S. Navy Steam Eng. School." Allen writes: "Your card of March 14 reached me here in this neck of the woods rather a bit late, since it travelled to my permanent home address in West Orange, N. J., and loafed about there for about three weeks before my dad felt it worthy of attention. So it arrived too late for return with news for the April REVIEW."

But here's a mouthful for the next issue, at any rate. First of all you will want to know why the letter head. Don't be alarmed, it is no indication that I have joined the

ranks of thirteen plutocrats. You see I do a lot of writing for technical magazines and quite a bit of consulting work along lubricating and combustion lines, hence the letter head was an enforcement, though the advertising thereupon does look egotistical, I'll admit.

I'm still with the Texas Company praises be, — though the past year of hard times had me scared of my job along with the rest of us, but the storm of cuts passed by with no further damage than a pay cut, which was very soon advanced again, so all in all I have no real kick. I'm now lubricating engineer at the Port Arthur Refinery of the Company. Have been here two years now and gained a whole lot of experience along petroliferous lines. I'm making lubrication and combustion of liquid fuels my specialty, so if you have a baby carriage that needs oiling or a cookstove that won't burn 'that good Gulf Kerosene' call me in and I'll promise not to stick you more than twenty dollars an hour for consulting.

If it had not been for the technical press my bank roll would have fared badly this year. The doctors have got to me good and proper. Had hardly got over an expensive trip north when Allen F., Jr. (Tech 1943) arrived; then the fair wife had to up and get her appendix in a mess and require its amputation. I've only one youngster now, age fifteen months. He's a pretty good kid, even if his old dad does say so, and bids fair to be just as dumb a shark at calculus as I was when Professor George tried to educate me."

1914

H. B. RICHMOND, *Secretary*, 73 Harlow Street, Arlington, Mass.

G. K. PERLEY, *Assistant Secretary*, 45 Hillside Terrace, Belmont, Mass.

Eight years old! As an alumni organization we have placed eight candles on our cake. We can hardly consider ourselves neophytes now. Whether or not we realize it, we are settling down to things worth while. In looking over the Class record cards, one cannot help being impressed by the responsible positions that a goodly number of the Class are holding.

We put the eighth candle on our cake at our annual dinner held May 6 at the Walker Memorial. This dinner proved as popular as have many of our past ones. In the afternoon the champion rollers assembled at the Memorial Alleys and broke a few records — direction of break not mentioned.

Roy Hardy and Frank Dunn, however, showed real class and gave the rest of us something to aspire to, at least. Jimmy Judge and your secretary each lost ten pounds trying to roll over fifty. This loss of ten pounds was very serious, as it brought us below the two hundred mark. We tried to eat enough at the dinner that followed, to regain a part of our lost weight in the community.

The dinner was served in the east balcony of the Memorial. Prior to the dinner a radio set had been installed by Professor Dellenbaugh. George Perley obtained enough head sets from the Holtzer-Cabot Company so that each diner was equipped. After the dinner, Professor Dellenbaugh gave an exceedingly interesting, popular talk on radio and then tuned up to the Amrad Station at Medford, from which a two-hour concert was enjoyed.

The most important business to be transacted was that of appointing a committee to consider plans for the ten-year reunion. Perley was chosen chairman, assisted by H. S. Wilkins and C. A. Corney. Pat Adams was appointed special advisor because of the very effective work he did in arranging for a five-year reunion. The duty of this committee is to study means for the reunion and to report its findings to the Class at our next annual dinner. As there were several questions that the committee desired opinions on, they asked the secretary to hold up the record questionnaire due to be mailed in May until such time as certain reunion questions could be added to it. This questionnaire will go out this summer. It is urged that every fourteener reply promptly.

It was with great regret that we did not have our President Buck Dorrance with us at the dinner. He had planned to come, but illness of Mrs. Dorrance prevented.

Those attending the dinner were: H. S. Wilkins, Howard Borden, S. H. Harper Roy Hardy, M. S. Maxim, Jimmy Judge, H. H. Ambler, G. A. Wagner, E. C. Crocker

Dick Favorite, Chet Corney, H. F. Brown, Frank Dunn, A. F. Petts, Walter Eberhard, C. P. Davis, S. W. Stanyan, C. H. Wilkins, Pat Adams, G. K. Perley and H. B. Richmond.

Our Boston luncheons were held on April 4 and June 6. The May luncheon was omitted because of the annual dinner. At the April luncheon Bill Price and Dwight Stump motored in from Framingham in a new Bay State that Stump was christening. At the June luncheon Fred Atwood stopped off on a trip back from Buffalo where he is now spending most of his time. At the June luncheon, Stanyan made his initial appearance and after viewing Healy's cabaret girls, assured us that he would be on hand at all future luncheons.

It is the sad duty of the secretary to announce the death at Scarsdale, New York, on January 31, of Winthrop Gordon Thomas, II, as a result of an acute attack of influenza. The sympathy of the Class is extended to Mrs. Thomas and to her infant daughter.

Two marriage announcements and two engagements of interest have recently been received at Class headquarters. The first involves none other than our Pan-American traveler, Ross, III. The announcement reads as follows: "Mr. and Mrs. Nathan A. Cobb announce the marriage of their daughter Ruth to Mr. Clyde Polhemus Ross on Thursday, the sixth of April, nineteen hundred and twenty-two. Falls Church, Virginia." Ross is stationed at Washington with the United States Geological Survey.

The second wedding announcement also involves a Washington fourteener. Calver, XI, who is with the American Red Cross Health Service is the one to join the ranks of the benedicts. The announcement is as follows: "Mr. and Mrs. Alfred Lappe announce the marriage of their daughter, Hutings Elizabeth, to Homer Northrup Calver on Monday the seventeenth of April, nineteen hundred and twenty-two, Pittsburgh, Pennsylvania."

Don Crowell, II, has been keeping out of sight lately. He has been spending his spare time riding between Boston and Montclair, N. J., where a certain Miss Doris Berry lives. The engagement has been recently announced and Don advises us that he hopes to take the final step this fall. For the second announcement we are indebted to *The Tech*. The following appeared under "Alumni Notes": "Mr. and Mrs. J. M. Anderson of Minneapolis recently announced the engagement of their daughter, Margaret Louise, to Edward Curtis Taylor, '14, of Springfield, Mass. Miss Anderson is a graduate of the University of Minnesota of the Class of 1916, and is a member of the Kappa Kappa Gamma sorority. Since graduation she has been engaged in social service work in her home state and in Massachusetts. She returned a short while ago from Europe where she had been for the past year with the American Red Cross. Mr. Taylor, after graduating from Course XI, took up the study of law at the George Washington Law School. He was the patent attorney for the Fisk Rubber Company."

When it comes to real publicity, Howard Borden, IX, is elected. The following headline appeared on the front page of the May 26 *New York Times*: "Edison Test Victor Wins A State Job, — Jersey Introduced Psychological Examination and H. G. Borden Gets a \$5,500 Post, — Outstrips 715 Applicants, — Thousands of Questions Asked in 188 Minutes — Test Made in Princeton Laboratory." The article that followed was two columns long, so cannot be quoted in full here. The following selections, however, give some idea of the story: "Howard G. Borden, 61 Hollywood Avenue, East Orange, N. J., one of the men who passed with high marks on the original Edison questionnaire test, has obtained the \$5,500-a-year job of Director of Labor, Industry and Administration in New Jersey by passing an even more severe questionnaire and psychological test.

His appointment was the result of an innovation in methods of selecting public servants. He was one of 715 persons who answered a 'blind' advertisement, stating some general facts about the position but giving no hint that it was a public office. These 715 were sifted in various ways until twelve were left. These were put through an examination lasting 188 minutes and consisting of several thousand questions intended to sample the quality of all parts of the candidate's mind.

The idea that a State might get high-class employees by following the methods of Edison and many other large employers, in seeking out young men of exceptional capacity, was the idea of Burdette G. Lewis, who was formerly Commissioner of Correction in this city, and is now Commissioner of the Department of Institutions and Agencies in New Jersey.

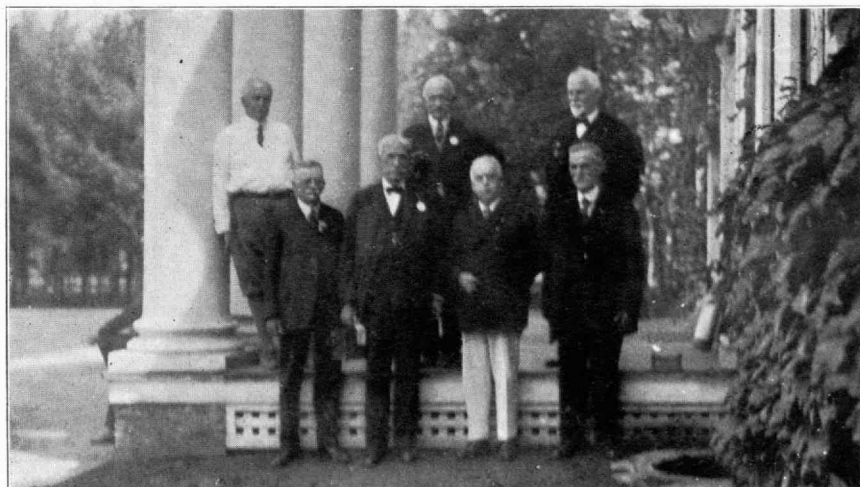
Mr. Lewis inserted his advertisement in *The New York Times* and in a New Jersey newspaper. "Six hundred and forty-six of the 715 replies received," he said, "came as a result of one insertion of a want ad in *The New York Times* of Sunday, April 23, 1922."



OLDEST AND
YOUNGEST
CLASSES
REPRESENTED

R. H. Richards, '68

L. M. Emerson, '22

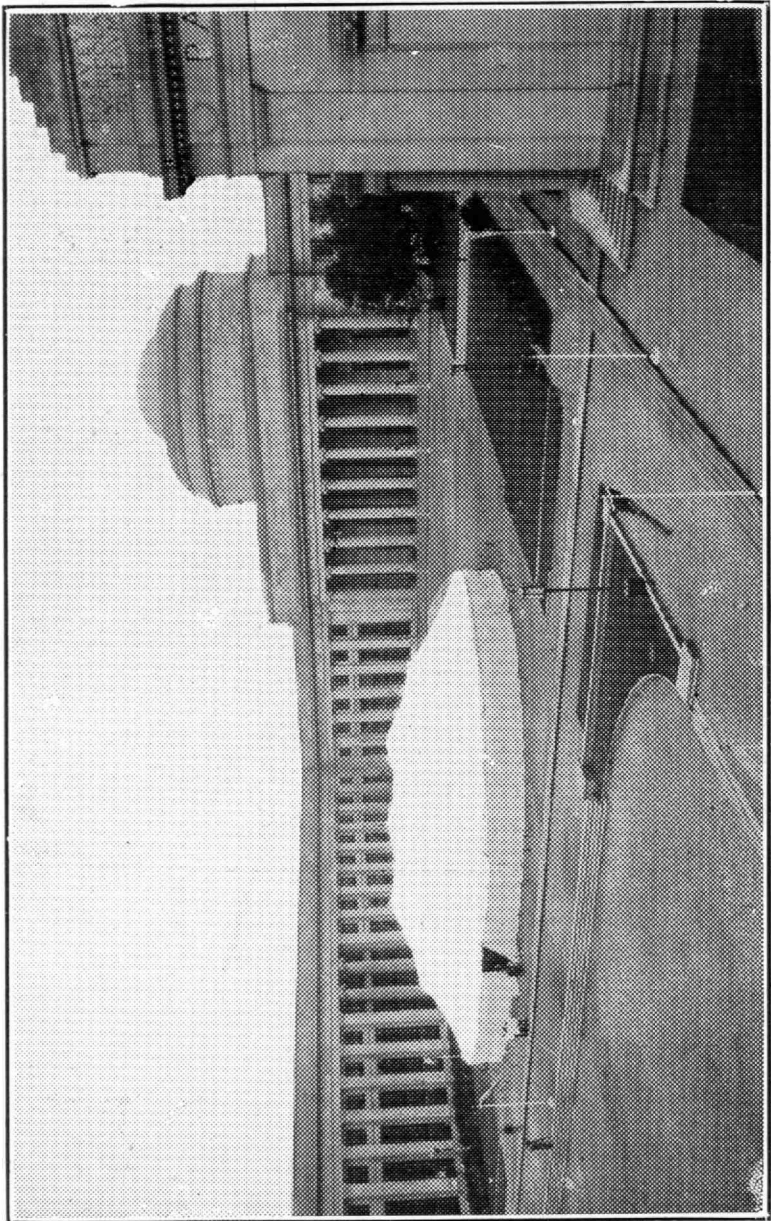


Back row, left to right: J. W. Rollins, '78; C. A. Judkins, '71; J. C. Chase, '74. Front row, left to right: R. A. Hale, '77; R. H. Richards, '68; E. W. Rollins, '71; S. L. Flanders, '74.

FORTY YEARS AND MORE OUT OF TECH



ENJOYING THE "CLAMFUL HOSPITALITY"



Christian Science Monitor

TECHNOLOGY'S ONLY ADEQUATE AUDITORIUM AND IT BLEW DOWN ON GRADUATION DAY

The advertisement was as follows:

"ASSISTANT MANAGER WANTED"

Executive assistant to President-General Manager, large organization having several large plants to handle personnel, several thousand employees, to control budget and expenditure \$6,000,000 per year and to develop additional manufacturing plants. Must be college graduate or full equivalent. Resident of New Jersey preferred. Age 28-45. Accounting or engineering experience or both desirable. Salary \$4,000 to \$6,000. A real opportunity."

As this was probably one of the most comprehensive examinations ever given for a high-grade executive, this safeguard is of far-reaching importance. Dr. Brigham's analysis of the examination was furnished to me within forty hours after the examination closed. The results, with two striking exceptions, corresponded with the ranking of the respondents, determined upon by analysis of the replies to the advertisement and through personal interviews.

Mr. Borden obtained a position with Edison by passing the Edison questionnaire and was superintendent of the blank molding department of the Edison plant in Orange until he accepted the place with the State of New Jersey."

Borden scored 170, which was thirty points higher than his nearest rival. It is interesting to note that C. B. Rogers, another fourteener, was one of the fourteen out of the 715 applicants selected to take the final tests. As his authority covers the New Jersey jails, Borden advises us that a good comfortable bed will await any fourteener who may be spending the night with the State.

Alden Waitt, V, has come in for a little publicity lately. He is a captain in the Chemical Warfare Service and stationed at the Edgewood Arsenal. His work as secretary of the Chemical Warfare School, which includes being property officer, supply officer, librarian, and editor of *Chemical Warfare*, the monthly magazine of the service, was not strenuous enough for him, so he removed the index finger on his left hand by means of a tear gas grenade. Alden was demonstrating a new grenade gun for a party of marine officers from Washington when the grenade, due to a defective fuse, exploded prematurely, blowing his finger "for a row of brick balloons," as he described it. This accident has not made him very downhearted, for he writes as follows: "The arsenal is a very pleasant place — Mrs. Waitt, Betty and I have enjoyed it very much. The social life is delightful and we have a great many things to keep us busy and contented. We have a fine gun club here and when the season is on there is no better place for duck and goose shooting. Last winter I, managed to get myself a goose and a few ducks, and am looking forward to November 1 when the season opens again. There is tennis, good bathing beach, golf course and all sorts of other amusements in addition to a weekly entertainment, dance, bridge, or something of that sort at the Officers' Club. The family is all fine — Betty is getting to be quite a big girl — she is nearly seventeen months old, and has been walking ever since she was a year old."

Bob Townend writes from the Victor Talking Machine Company at Camden, N. J., as follows: "Say, don't let Buck Dorrance kid you into thinking his soup business isn't good. A trip by his warehouses would indicate a different story. Buck moved out to Riverton a few months ago next door to the golf links, so I see him on the train occasionally. Dave Gould, with his expansive smile, gets over to Camden once in a while but I don't run into many of the other fourteeners. My own work is about the same as usual. We are still trying to make the best records and talking machines in the world and without being conceited about it, I think we are succeeding."

Kirk McFarlin appears to be enjoying the life of a New York Banker, as indicated by a recent letter, part of which reads as follows:

"Excitement has been generally scarce since the termination of the 'late unpleasantness' — but I have come to the point of experiencing the thrill of a change of address, and hasten to pass the news to you. After the twenty-third instant creditors will find me at 52 Clinton Avenue, Maplewood, New Jersey.

Unless my memory fails, you were advised early in 1920 that I had forsaken engineering temporarily at least for the very tempting field of foreign trade. After learning a few of the ropes with an export firm in New York and then seeing the other side of the picture during a very interesting period in Santo Domingo, I was fortunate enough to obtain a position with the National City Bank in New York. That connection was effected in February of 1921, and has since proved so absorbing that I have become reconciled to the

loss of an honest profession. While you may doubt my words, I shall insist that there are as many phases to banking as there are subjects in a four years course at Tech. I never believe in recommending to a classmate what to do with his own money, but all four-teeners having charge of other people's funds are invited to open an account at 53 Wall Street.

Contrary to popular tendency, I am still single. So I imagine my next letter to you, in the far distant future, may deal more particularly with the matrimonial phase!!"

Two of our classmates have had the misfortune to be quite seriously ill this spring. Vernon Tallman was confined at the Brooks Hospital, Brookline, Mass. with rather serious throat trouble. When he went to the hospital it was expected that only tonsils were to be removed, but other complications followed which kept Tallman at the hospital for some time. — Alden Crankshaw has had a very serious nervous and mental breakdown.

A. E. Hanson has been appointed superintendent of mechanical plant at the Bureau of Standards. His organization consists of about ninety employees and the work includes the operation of the plant as well as the general care and improvement of the Bureau of Standards building and grounds. All the electrical, steam fitting, plumbing and construction work come under his supervision. In order to accept this appointment, Hanson sold out his interests in the consulting engineering firm of which he was a partner. As if this work were not enough, he is building a house on the side and spending much of his time entertaining his six months old daughter.

The secretary is not the only one who has been interested in radio. Among the new comers are H. T. Bent and A. F. Graham. Bent appears as president of the Southern Radio Sales Corporation of Newport News, Va. — Graham is general manager of the Par-Kay Radio Corporation of Cambridge, Mass. Graham's company is manufacturing complete sets, while Bent's company has been limiting its activities to sales work.

M. S. Maxim has recently taken a trip through the South and Southwest, particularly to inspect sulphur mines in Texas. Maxim is with the Merrimac Chemical Company of Woburn, Mass. — H. L. Gardner who is with the Gilbert & Barker Manufacturing Co. has returned from his business trip to England, France, Holland and Belgium. He is now stationed at the Los Angeles office. Gardner calls our attention to the fact that he is one of the few members of the Class who have stuck five continuous years to one job. — J. E. Giffels spends his time looking after construction and repairs with the Robert Gair Co. of Haverhill, Mass. in the capacity of assistant mill engineer. — S. W. Stanyan has been wearing a broad smile lately. He claims the reason to be that he has been advanced from office boy to general manager of the Farrington Manufacturing Co., of Jamaica Plain, Mass. Actually we believe the change was not quite as great as this, but Stanyan has been made a department head in the organization. He advises us that if any fourteener needs a new case for his spectacles or Gillette safety razor, that he can supply them with one, because their specialties are jewelry and eye glass cases as well as the cases for Gillette safety razors.

We were very glad to have Gilbert Wagner come down to our annual dinner in May. Wagner is running an electrical contracting business at Stafford Springs, Conn. Among other things he is local representative for the Delco Farm Lighting outfit. Wagner boasts of three husky youngsters, two boys and a girl.

While these notes were still being typewritten, the announcement came telling of the marriage of Israel Paris to Miss Lena Ruth Becker on Sunday, June 4. Mr. and Mrs. Paris are to live at Hilltop, Glen Echo, Md. Paris is in business for himself as patent attorney in Washington.

The engagement was also announced of George B. Ott, X, Moukden, China, to Miss Harriet Louise Howie on April 20, 1922.

ADDRESS CHANGES

E. W. Bowler, XI, New Hampshire College, Durham, N. H.; H. N. Calver, XI, The Hadleigh, 16th and V Streets, N. W., Washington, D. C.; C. H. Chatfield, II, care Wright Aeronautical Corporation, Paterson, N. J.; R. C. Doremus, II, 4108 Philadelphia Avenue, Detroit, Mich.; R. J. Favorite, II, 30 Varnum Street, Arlington, Mass.; J. E. W. Giffels, II, care Robert Gair Co., Haverhill, Mass.; J. A. Hadley, II, Queens, N. Y.; P. H. Hsu, V, International Dispensary, Soap Factory, Li-Ka-Wei, Shanghai, China; W. P. Keith, X, care Seiberling Rubber Co., Akron, Ohio; A. W. Johnson, II, 55 Buffum Street, Buffalo, N. Y.; N. D. MacLeod, II, care Abrasive Machine Tool Co., East Providence, R. I.;

L. F. Marsh, II, 62 Cottage Street, Hudson, Mass.; Capt. E. E. Murphy, I, United States Army Post Bell, Fort Winfield Scott, Cal.; C. H. Ober, I, care A. W. Shaw Co., 44 Bromfield Street, Boston, Mass.; E. L. Osborne, I, 29 Cedar Drive, Great Neck, N. Y.; Robert Parsons, VII, 106 Franklin Street, Lynn, Mass.; R. W. Peatross, Jr., II, care W. C. Hedric Construction Co., Dallas, Texas; E. E. Snyder, Jr., X, 110 Gordon Avenue, Syracuse, N. Y.; E. I. Staples, VI, 161 Avenue A, Westinghouse Plant, East Pittsburgh, Penn.; R. A. Trufant, I, 38 Hayden Avenue, Whitman, Mass.; J. M. White, VI, 3136 Broadway, Kansas City, Mo.

1915

F. P. SCULLY, *Secretary*, 118 First Street, Cambridge, Mass.

H. C. THOMAS, *Assistant Secretary*, 100 Floral Street, Newton Highlands, Mass.

Before assuming the active role again, the secretary feels that it is no more than just that the credit for the work which has been done this year should be publicly acknowledged as belonging to Howard Thomas. We believe that the Class notes have been fairly interesting, and, though the criticism can well be brought that the news as a whole is confined to a relatively small portion of the Class, that is a condition which can only be remedied, by the fellows themselves taking a more general interest and each one doing his part. The positions of the secretary and assistant secretary involve considerable work and it is rather disheartening at times to see how little interest is apparently taken by men who in their undergraduate life, showed every indication of being the leaders in Class spirit.

Your secretary has now returned from Buffalo and hopes that the new year will be one of progress. The REVIEW is to come out more frequently and hence the Class letters will be more up to date. If every one who reads this will resolve to do his part, instead of letting the other fellow do it, they will be well repaid.

Abraham Hamburg, XI, who is in the engraving business in Boston, married Miss Hays Koppelman on April 1. The romance would make most interesting reading but probably this is not the best place to go into details. Miss Koppelman arrived from Palestine last October. She is an accomplished linguist and is adept in five languages. A postal from Manitou Falls, Colorado, to the secretary, demonstrates that the wedding trip is being made in real style.

The memories of summer camp are brought back by the following letter from Bill Campbell, I, who dropped into Buffalo selling machinery for the Bridgeport Automatic Machine Company.

"I was indeed sorry to miss seeing you at Buffalo, but want to thank you for your good letter. If I get up to Boston, I'll at least give you a ring on the telephone, and it's too bad we couldn't go over and have a beer together at the Brunswick. I don't see many of the old crowd although once in a while one bobs up. Met John Hessian on the train a little while ago, and he gave me the news of a few of the bunch, little Rooney and Larry Quirk. Then Virgil Wardwell lives in Stamford, but I haven't seen him, except once at a distance. Otto O'Donnel was a major in the Regular Army at last accounts. I give Charley McGuire a ring every time I get to Providence, but he has been out of town the last couple of times I've been there. Was glad to hear that Jimmy McIntyre is still on deck. Please give him my best if you see him in Boston.

I was married shortly before the war and have two youngsters now, as well as a few gray hairs, so am well on the way to become a fossil.

What ever became of Jack Dalton? I used to hear about him indirectly now and then prior to the war when I called on a girl in Portland. I was looking through some old papers the other day and turned up that old picture of our minstrel show at camp. If you ever get down to the vicinity of either Stamford or Bridgeport and don't drop in to have a meal with me, I'll have you shot at sunrise. My best to all the crowd."

Bill's address is 15 Vernon Place, Stamford, Conn. Another one of that old crowd is Wardie whose following letter gives an indication of what he is doing.

"I received your letter of March 3. Since my father's death on January 16, 1921, I have been running the business, or better, I should say, the business has been running me. You will find enclosed a picture of a bridge we built this past summer. At present I am placing a 20-foot C. I. sewer pipe under the Passaic River for the Passaic Valley Sewerage

Commission in New Jersey. I have been busy continuously during the past depression, so have no kick on that score. Spring inquiries are coming in good volume out of which I hope to get my share.

I know you will be interested in knowing that I have a boy in school, second grade, a girl in kindergarten and another boy two years old."

The echoes of the war still are heard and the *Boston Globe* on March 4 published an interesting note on Ralph Malcolm, I, who will always be remembered with sincere esteem by those of us who were privileged to know him well.

"Ex-Selectman and Mrs. George E. Malcolm of 328 Morton Street, received from the Government today a copy of the history of the 27th New York Division in the World War. This was accompanied by a posthumous divisional citation to their son, Sgt. Ralph Read Malcolm, which reads as follows:

'Divisional citation, 27th Division, N. Y., to Sergt. Ralph R. Malcolm, Battery F, 105th Field Artillery, for conspicuous gallantry in action during the operations of the 105th Field Artillery in the vicinity of Cote de l'Oie, France, on October 2 and 3, 1918, in carrying ammunition by hand, a distance of twelve hundred meters from the ammunition dump, to the battery position, under heavy enemy shell fire throughout the night, and the following afternoon, in order to enable the battery to fire an offensive barrage in support of the infantry advance. Signed, Maj. Gen. John F. O'Ryan, in command.'

Sergeant Malcolm served eight months with the New York State Militia on the Mexican border in 1916. His regiment was mustered into service June 30, 1917, and sailed overseas June 30, 1918, arriving in France July 13, 1918. He took part in the St. Mihiel and the Meuse-Argonne fighting. He was appointed second lieutenant by General Pershing, February 1, 1919.

After a splendid war record Sergeant Malcolm died at sea, March 8, 1919, from pneumonia, and was buried March 16, 1919, in Evergreen Cemetery, Stoughton, with full military honors.

He was born in Stoughton, July 14, 1892, was graduated from Stoughton High School, Chauncy Hall and Massachusetts Institute of Technology. Sergeant Malcolm was a member of the High School Association, the Alumni Association, Massachusetts Institute of Technology, and the Civil Engineers Association of New York.

He was a civil engineer, employed by a New York State Commission, and made for himself an enviable record."

The naval architects were more or less kept pretty much by themselves and we have not heard so much from them recently as we should. It was, therefore, very gratifying for the secretary to meet by accident C. F. Ellicott, XIII, who is now located in Baltimore with the Ellicott Machine Corporation, large manufacturers of marine equipment. After leaving the Institute, Ellicott followed up his specialty with several different concerns, and for a time was located at Sparrows Point with the Bellevue Steel Company. During the war he was a captain in the engineers and saw active service abroad. When he returned from service he went with his father and is now settled in Baltimore permanently. The secretary tried to reach Walters who is also in Baltimore but unfortunately he was out of town. Walter's activities were noted in the last issue of the REVIEW.

Jim Tobey, IX, has again burst into print and if the secretary's information is correct, Jim was very active in organizing a chapter of the law fraternity at Washington whose recent initiation of President Harding and General Pershing was given such wide publicity. How about this, Jim?

During the travels of the secretary, which now, due to his relocation in Boston, will be somewhat curtailed, it was sometimes possible to see some of the men in their own surroundings and so a visit to Charles Hall, I, in his office opposite the McAlpin in New York demonstrated that the good things we had heard about the way he was putting the products of the Carr Fastner across, were only too true. Charley has, so he says, found an ideal place to live in New York City and even raises vegetables in his garden. Last week the secretary managed to borrow a few drawing instruments from H. T. Bent, XIII, while on a flying trip to Buffalo and return. Bent is with Bley & Leyman, architects, on Delaware Avenue, Buffalo, and his name is on the door as an associate. They are very busy and are engaged in some very large work at present.

An effort was made this year to revive the Technology Pops night. Unfortunately no plans were made to enable classes to sit together and we took a chance on buying twenty tickets with the idea of finding the purchasers from the men around Boston. We

did get Clive Lacy, Horatio Lamson, Frank Murphy, George Rooney and Henry Sheils with their wives and Charlie Ward and the secretary furnished the bachelor representatives. All the Class seemed to be getting along pretty well and with the exception of Charlie Ward have kept pretty close in touch with the Class activities in Boston. Charlie was experiencing his first return to the Institute since his graduation and from appearances was enjoying it. Since '15, he has been engaged practically continuously in the designing or construction of reinforced concrete and for the last year has been active in the building of the Ohio State Stadium in Columbus, Ohio. He had no definite plans as to his next step, but a postal which has been received by George Rooney gives his present location as Newark, N. J. Lamson is engaged in some very interesting work on direction finder for submarines and we will have to see if we can't get him to write a synopsis of his work in the development of this science for the Class notes.

There are a number of '15 men actively connected with the Institute at present. On the instructing staff are Charley Mitchell and Pete Young, while Lester Morse and Captain Jim McIntyre are hotly pursuing studies there in the Government courses.

Easty Weaver, XIV, is by this time down at Scituate for the summer. He was unable to come to Pops due to a previous engagement to pack the furniture that night. Both he and Arthur Ball, XIV, are still with Kalmus, Comstock & Westcott. Art is sojourning in that terrible place called Hollywood. There are a number of '15 men in Los Angeles and it would be a mighty good idea if they could get together socially and so keep up the Class spirit.

ADDRESS CHANGES

Charles A. Bidwell, Jr., P. O. Box 252, Springdale, Penn.; Edmund G. Brown, care E. R. Brown, M.D., 164 Webster Street, Malden, Mass.; Evers Burtner, 15 Audubon Park, Lynn, Mass.; Ming Chow, University of Communication, Siccawei Road, Shanghai, China; Everett S. Coldwell, The University Club, 232 Golden Hill Street, Bridgeport, Conn.; Fred L. Cook, 306 Bryant Street, Buffalo, N. Y.; Henry F. Daley, care B. F. Sturtevant Co., 135 North Third Street, Philadelphia, Penn.; George M. Hohl, 47 East Market Street, Bethlehem, Penn.; Donald O. Hooper, 185 Ashmont Street, Portland, Me.; William Jennings, Engineering Department, Utah Power and Light Co., Salt Lake City, Utah; Ta Kang Kao, Lam Glines & Co., Inc., 4B Peking Road, Shanghai, China; Julius Kuttner, Aschaffenburg Frohsinn Str. 3, Germany; Wai Po Loo, American Trading Co., Shanghai, China; William Mellama, 1442 Scott Avenue, Los Angeles, Cal.; Franklin L. Myrick, P. O. Box 60, Reading, Pa.; George F. Nixon, 227 West Street, Leominster, Mass.; Elwin P. Norberg, 704 Union Bank Building, Los Angeles, Cal.; Thomas C. Pond, 11401 Prairie Avenue, Chicago, Ill.; Maurice W. Salomonson, 138 Harvard Street, Newtonville, Mass.; Vincent Sauchelli, 2025 Broadway, Apartment 2B, New York, N. Y.; Francis P. Scully, 118 First Street, Cambridge, Mass.; Frank S. Sinnicks, 706 Santa Fé Building, San Francisco, Cal.; Edward H. Stelle, 1246 University Avenue, St. Paul, Minn.; Howard C. Thomas, 100 Floral Street, Newton Highlands, Mass.; Kebe Toabe, 1189 East Grand Street, Elizabeth, N. J.; Samuel L. Tolman, 1910 Eddy Street, Chicago, Ill.; Raymond H. Walcott, care Standard Chemical Co., Fassett, Quebec, Canada; Bliss K. Wentworth, 1008 East Main Street, West Frankfort, Ill.

1916

WILLIAM W. DRUMMEY, *Acting Secretary*, 533 Washington Street, Dorchester, Mass.

EDWARD CLARKSON, *Assistant Secretary*, 315 Court Street, Clarksdale, Miss.

Among the important happenings since the last REVIEW that came out is the change in the office of secretary-treasurer from Charlie Lawrance to William W. Drummey, acting secretary-treasurer. Charlie Lawrance's resignation to William J. Farthing is as follows:

"I herewith present my resignation as secretary-treasurer of the Class of 1916, to take effect as soon as a successor can be chosen.

My reasons are as follows:

First. A motion passed at the Class meeting held at the five-year reunion in June, 1921, makes it necessary that the Class secretary-treasurer for the Class of 1916 reside

in the immediate vicinity of Boston, where he can be within easy and continuous touch with the alumni office. As I am not now residing near Boston, and visit that city rarely, I am considerably out of touch with the alumni office.

Second. For considerably over a year I have been hampered by a serious and painful eye trouble which refuses to yield to the best of medical treatment and it has become difficult for me to do even a moderate amount of close work.

To conform with the spirit of the motion mentioned above, and since the office of secretary-treasurer requires considerable correspondence, I feel that the work should fall to others better fitted to fill it, and therefore request acceptance of this resignation as early as conditions permit. Respectfully yours, *C. W. Lawrence.*"

Bill Farthing has not been able to accept this resignation because of lack of time. A financial report of the Class funds is in preparation but cannot be completed for the present issue of the REVIEW.

We are glad to report that two one hundred dollar Liberty Bonds have been received from the funds under charge of Jimmy Evans which, when turned into cash, will provide a sufficient working capital for another year or so. There is, in addition, a small fund in cash available for immediate use. Class funds are in Claussen's hands.

During May, Sandy Claussen called a meeting of the members of '16, residing near Boston which, due to the "necessary absence" of so many of our Class members, had to be postponed until later in the year.

Class of '16 is still upholding the traditions of leadership in many fields which have been handed down from the classes which have made Technology great!

From the University of California comes the announcement of the appointment of Mr. Charles F. Gross, XIII, as assistant professor of marine engineering and naval architecture. "Professor Gross is a member of the Society of Marine Engineers and Naval Architects and of the Society of Naval Engineers. The appointee is a graduate of the Massachusetts Institute of Technology, after which he was an instructor in the Department of Marine Engineering and Naval Construction at the United States Naval Academy, Annapolis, Maryland. Formerly the courses were under the supervision of the United States Shipping Board. The courses as stated in the bulletin cover the designing of ships as well as the propelling plant. Records show that colleges offering similar courses have at present the greatest number of students along the lines of marine engineering and naval architecture despite the fact that shipbuilding is at a low ebb. It bids fair to predict that the University of California will be the center for technical training along these lines on the Pacific Coast."

A course for prospective aviators and those who expect to enter any branch of the aerial service has been established by the school of engineering of New York University. Seven lectures will be given in the course, which will be conducted in the new Sage Research Laboratories at University Heights. These lectures will cover the structure, theory, motor design, operation and applications, and will be given by Alexander Klemin, XIII, who, during the war, was in entire charge of the Aeronautical Research Department, U. S. A. McCook Field, Dayton, Ohio. Mr. Klemin has been associated with the Packard Motor Car Company, the Curtiss Aeroplane Company and the Standard Aero Corporation. He was educated at London University, Imperial College of Science and Technology, and has a degree in this country from the Massachusetts Institute of Technology. The lectures are designed for fourth year and graduate students, but the university has opened them to non-students who are interested in aeronautics.

Wilfred A. Wylde, X, has been appointed manager of the Liberty Paper Company of Bellows Falls, Vt., making him one of the youngest heads of a paper company in the entire country. For two years he lectured on chemistry at the University of Maine and for four years has been head of the Chemical Research Department of the Eastern Manufacturing Company of Bangor, Me.

The *Cleveland Plain Dealer* has announced that Mr. Gordon M. Fair, XI, has assumed duties as director of the birth and death records in the city of Cleveland. Mr. Fair served overseas with the Canadian army. "The only statistical work I was engaged in then," he said, "was counting the number of Germans I got." He was formerly instructor in sanitation at Harvard University and in vital statistics at Harvard Medical School, Harvard School of Public Health and the Massachusetts Institute of Technology. He contributes to health and statistical publications. He recently returned from Europe, where he conducted a health survey of the middle European countries in connection with

the sanitation division of the Legion of Red Cross Societies, with headquarters in Geneva, Switzerland.

Prof. Robert E. Wilson, V, keeps up his good work in an interesting address before the Delaware section of the American Chemical Society on the subject of "Why Oils Lubricate," the talk being based on the result of research work in his laboratory. Professor Wilson pointed out the shortcomings of present specifications for lubricants, and discussed the various lubricants in their different uses. It is mighty gratifying to know that somebody is trying to give us a uniform practical standard for testing the oils other than trying in the family flivver with questionable results.

Henry Shepard has transferred his connections from the Lovejoy shock absorbers to a brand new line — organizing the sales territory for an accounting system, with his headquarters in the Little Building, in Boston. He writes, "I am now district manager for the International Accountants Society of Chicago, and my job is to organize and train salesmen for the territory and keep them on their toes. It is certainly giving me some excellent experience."

Saul Makepiece informs us that business in the mill and textile industry is reviving somewhat and he again has time for some designing work in addition to cornering his usual allotment of golf prizes.

Hovey Freeman has likely taken up the development of radio work and has successfully received messages from as far away as fifteen miles (!). However, we have it on still better authority that he has been elected vice-president of several of his father's insurance companies, and as such, is functioning most satisfactorily.

Don Webster again breaks into print telling of another change in occupation. He writes: "I am sorry that I have been so reticent regarding my whereabouts. I left my firm in New York in January and have been in Boston ever since, employed temporarily and idling temporarily. In consequence I know very little of doings in New York. A postcard from Sandy Claussen apprises me of a dinner at the Engineers Club next Tuesday at which you wish to resign. I cannot blame you, Charlie, the secretaryship of the Class these days is tough plugging work. You've your eyes to consider primarily. I cannot see any immediate relief from the slump into which we've fallen as a Class. We're most of us far behind in the race for bread (I feel as though I'd scarcely started) and can perforce spare little time for the amenities of life outside our small spheres. Critics and non-coöperationists in the matter of Class doings are easy to find, responsible workers are at a premium. We've had all admirable raving over from '17 in every issue."

A card from South Bend, Indiana, announces the arrival of Edward Hudson Williams, 3d, on April 23, 1922, to Mr. and Mrs. Edward H. Williams, 2d.

The engagement is announced of Miss Emily Glidden, daughter of Samuel J. Glidden of Cordis Street, Charlestown, Boston, to Warren Andrews Strangman, son of Mr. and Mrs. Walter W. Strangman of Dorchester. Mr. Strangman is a graduate of Technology, Class of 1916. During the war he served as ensign in the United States Navy, engaged in submarine research.

Also, we are glad to announce the engagement of Miss Florence Mead of Quincy and Walter Vinal Reed of South Weymouth. Miss Mead is the daughter of Mr. and Mrs. George P. Mead. Her fiancé is the son of J. B. Reed of South Weymouth. He is a graduate of Thayer Academy and of Massachusetts Institute of Technology, '16, II. He is a member of the Phi Kappa Sigma fraternity. In the World War he served as first lieutenant in the Artillery Corps.

Through an omission we neglected to announce the arrival of Elizabeth Gray to Mr. and Mrs. Harold Parker Gray, II, at Akron, Ohio, on October 27, 1921. Our welcome is none the less cordial, Harold.

Ned Hewins, XIII, notes that "the Disarmament Conference rather put the shipyard business on the backward road at Newport News Shipbuilding and Drydock Company for a while," and "made him contemplate strongly the possible means of going into the teaching profession." He was saved from this by the landing of the big Leviathan job by his company, which nicely squelched the "revered Senator of Massachusetts." Although countless men have been discharged from the employ of the Newport News Shipbuilding and Drydock Company, Ned has been fortunate in being kept on full time work on the Leviathan job.

Pansy Parsons, II, has added new laurels to his achievements by doing the impossible, making a full round of golf in ninety strokes, thereby winning many prizes and much

glory from his sales manager. Also, he made the outside trip around Cape Cod in a small sailing boat with many thrills and close calls during the recent blow.

Walt Stewart is assistant superintendant of the Blackstone Manufacturing Company, in Pawtucket, and business is reported to be good with him. His brother, Art, is also assistant superintendant of the Lonsdale Company, in Pawtucket, but as his company has been tied up for over twenty-two weeks by strike his duties are still very light.

Sandy Claussen writes as follows: "I wrote you this morning that I would be glad to do your work until I could find a successor. I have since been in touch with Bill Drummey and he says he will be glad to help out for, say, six months more or less until we can have a regular meeting and election. So you are therefore at liberty to forward to him at his home address such money and papers as he will need. He says, 'Let 'em come'." Do you see that? *Let 'em come.*

Mr. and Mrs. Richard Little Wyckoff announce the marriage of their daughter, Helen Louise, to Richard Stewart Ranlett, Springfield, Mass., Tuesday, May 9, 1922.

Mr. and Mrs. Clarence Porter Dodge announce the marriage of their daughter, Ada Kemp, to Mr. Kemerton Dean, Tuesday, June 22, 1922, at Houston, Texas.

Walter Blackwood is alive and so is Tom Berrigan, but just how or why the acting secretary can't tell you; they wouldn't tell him. — Ned Peters is an electrical engineer with the Rhode Island Light and Power Co. in Providence and is also the proud father of one of those "finest babies." — Charles A. McGuire has assumed full control of the McGuire Contracting Co. of Providence and is making so much money that he is unable to spend the increment; he's married, though!

Miss Elizabeth Pattee is actively engaged — in the practice of architecture. — Note paper proudly proclaims that C. J. McCarthy is now "Chairman of the Entertainment Committee of the Washington Society of the Mass. Inst. of Technology." — Paul Duff has successfully completed his third year in the Harvard Medical School. Paul is following in his father's footsteps, for he also is an M. I. T. grad, now a physician. — Henry Sheils is a general contractor in the building game and is enjoying a large business; his office is in Roxbury Crossing, Boston.

Mrs. Walton Martin announces the marriage of her daughter, Beatrice Lorchan, to Mr. Walter Binger on Thursday, June 1, 1922, in New York City. Miss Lorchan is a graduate of Bryn Mawr, class of 1919.

When some of you bashful sixteeners meet, don't forget that the secretary is not a medium, nor does he boast of a radio receiving station. If you want to know what your classmates are doing, tell what you are doing, and the example may "take." Anybody not heard from in any way for seven years is officially dead.

1917

1917 HOME OFFICE, Room 3-208, M. I. T.

The last issue of the REVIEW appeared prior to the formulation of plans for the 5-Year reunion but due to the efforts of the committee, which consisted of R. S. Stevens, XV, as chairman, A. P. Dunham, II, and Ted Bernard, VII, the affair was planned, and notices and information sent out, producing an attendance at one or more of the events totalling sixty-five. Considerable help in preparation was given by Dick Loengard who, although he did not get to the reunion himself, succeeded in rounding up the New York crowd. The following letter was received from him:

"Thirteen '17 men appeared at the Technology Club last night and we had a very successful dinner, although we had hoped for a larger crowd. Stockman did noble work at the piano and the rest of us sang off key with great enthusiasm. Those present were E. B. Payne, E. B. Stockman, Monty Lovejoy, Dix Proctor, Pen Brooks, Dusty Cronin, J. R. Kelly, Enos Curtin, Bob Scannell, J. R. Ramsey, H. W. Kimball, A. K. Althouse and myself. Only the first four are surely coming to the reunion, but several more are trying to get away for at least part of it. There was complete unanimity of opinion, however, that the plans as outlined in the last dope letter you sent out sounded exceedingly

good. Everyone was in excellent spirits. I am sure that I shall not be able to get away for Thursday and Friday, but I hope to get to Boston for the Saturday festivities, and look forward to seeing you then. With best regards to you and your co-organizers."

Deac Young was put in charge of getting the Chicago crowd together and here's what he writes:

"I received your registered letter yesterday with regard to getting the Chicago crowd together for a dinner about the time of the celebration in Boston. This letter arrived at a time I am leaving Chicago for a few days but I am writing one or two letters to get their ideas of the kind of an affair we might hold. You may be sure that I will do my best to get a good crowd together here and thank you for thinking of me in this connection."

Malcolm Brock, who was in charge of the Akron arrangements, wrote Ray Stevens as follows:

"Got your letter with the seventeen cards inclosed. Will stir something up at once. I will probably be in Boston June 18 and in New York on the nineteenth. Would like to be with you at the dinner but that means I will have to scrape up cash enough to live in Boston for a whole week besides letting my business at home go to the dogs in the meantime. Did you know I was starting a selling organization in the form of a partnership in New England? We have a suite of offices (two rooms) 549, the Little Building, and call ourselves The Akron Home Supply Company. We sell all sorts of household rubber goods such as aprons and Teddy pants. If you need any let me know and I will see that you are charged a very good profit on the bill you get."

The affair opened with a buffet supper at the Phi Kappa Sigma house, 530 Beacon Street, at which H. E. Lobdell, IV₂, acted as host. About fifty-five were present, the house being given over to the Class. As each man arrived he was conducted to the second floor where C. M. Dean acted as *valet de chambre* and distributed the official reunion uniform made of blue denim. On the bib were stencilled in large white figures the Class numerals and the name of the individual supposed to be inside. Much favorable comment was heard regarding Dean's work but the variety of misfits attendant upon the distribution was extremely noticeable. His apology was that he had picked the sizes according to the photographs in the Class senior portfolio, all of which leads us to believe that the Class must have changed. Following the supper a procession was formed and proceeded to Symphony Hall where as usual, the Class made itself extremely noticeable by its vocal efforts. In addition to the usual nondescript cheering they were invited, — and did in a body ascend to the stage and assisted by the Technology Choral Society, rendered for the first time on any stage, "M. I. T.," the prize-winning song written by Arthur E. Hatch, '91, and Mrs. Hatch. Very luckily this rendition took place toward the close of an otherwise successful evening and the members of the Class were able to depart without serious injury.

On the next morning about twenty assembled at Walker and left at nine o'clock, (being delayed by McGrady having to hunt for his suitcase which had been unkindly purloined and sent to Chicago by mistake), for Camp Wawona, West Swanzey, N. H. According to our representative who was present on the trip, the ride up although enjoyable was marred by frequent stops made necessary by the over-indulgence on the preceding evening of various members of the party. Ray Stevens, the rear guard, saw to it that stragglers were herded together and upon arrival at the Camp, managed to get most of the party in for a swim prior to lunch. In the afternoon it had been planned to have a number of games, but the aforesaid over-indulgence took all of the pep out of many of the unlucky victims and a scrub baseball game in preparation for the next day, together with golf at the Keene Country Club for a few, filled in the time until dinner. Don Friend's radio set, especially installed for the occasion, heard Schenectady and all present received a very delightful health talk on "Care of the Teeth," etc.

The real event of the outing was the regular nine inning ball game on Friday morning, Dud Bell having arrived just after breakfast with good spirits, having incidentally beaten down the taxi-cab driver's price about fifty per cent. The game was called at 9.00 a.m., the two opposing sides being called respectively, the Eddy Braves and the McGrady Giants. Lack of space prevents inclusion of the box score which was, we are informed by the umpires, Messrs. Pollard for the Giants and Friend for the Braves, twelve to eleven in favor of the McGrady outfit, all of which tells us who was the strongest umpire. The Braves' "star" pitcher, Dean, was a regular iron man. He lasted the full nine innings and

was said to be going strong, with a possibility for a double header. Brick Dunham, Mac's selection for the mound, was holding his own when Mac decided he wanted Brick to reserve his strength for the batting rally which the Giants decided beforehand to stage in the last two innings, so Basch and Hendie relieved. Mac and Bill are both said to have caught like veterans and Schoonie's catch in the first inning would have done credit to Ty Cobb. Payne, from New York, was jogging home on a long hit, when some one told him to slide. He obeyed promptly and the home base was wiped out.

A war canoe race was scheduled after the ball game but the swimming proved much more attractive and at this time Schoonie produced his spare bathing suit. Tennis and golf, at which Dud was victorious, filled the afternoon. In the evening the radio was out of commission on account of "static," and pool and bridge occupied the boards. Dud was not the winner. The New York crowd, composed of Lovejoy, Proctor, Marlow and Payne demonstrated the effects of misspent winter evenings at the New York Tech Club. Schoonie entertained during the evening by playing various selections on the piano. His encores were particularly appropriate and by request he played something soothing which he called, "The Blue Danube Waltz."

On Saturday morning the party paid their parting respects to their genial host Mr. O. E. Bourne, and took their departure to Boston minus one Chevrolet car which has since been recovered.

The culminating event of the reunion was the dinner at the Lenox attended by fifty-three, and the feature of the dinner was the toastmaster. This is said with due respect to the speakers of the evening, Bursar Ford, '07, and Hon. Dr. James P. Munroe, '82, secretary of the Corporation, for they were not subjected to the same inspiration as was the toastmaster. Class headquarters were established in Room 804, before, after and during the dinner. Headquarters were closed about midnight following a golfing contest therein between R. J. McLaughlin and society in general. Prior to the speaking, nominations were open for Class officers, which were as follows: for president: J. M. DeBell and L. L. McGrady; for treasurer: A. P. Dunham and H. P. Eddy, Jr.; for secretary: Frederick Bernard and Raymond S. Stevens; for secretary emeritus: Harold E. Lobdell. Since the polls do not close until July 8, it is impossible for us to announce the results.

The distance cup was presented by the toastmaster to A. F. Hegenberger, of Dayton, who, the toastmaster, although he stated that he was not "commercially geographied" ruled "irrevocabraby" that Dayton was further than Ashtabula Harbor from which Rusty Robinson hailed. Schoonie was unanimously ruled out although he contended that he came from Coblenz, Germany. The committee felt after consulting Stan Dunning, the donor of the cup, that Schoonie only came home because he had to, and not for the purpose of attending the reunion.

Bursar Ford spoke of the financial problems of the Institute and gave some illuminating notes and figures as to the cost of various features of the Institute's business. Dr. Munroe, who signs the diplomas as secretary of the Corporation, Dud introduced as the man who "stigmatized the degrees." Dr. Munroe recalled the occasion of the senior dinner in December, 1916, at which he had spoken, and congratulated the Class on having so well survived the unrest and disturbances of the last five years and then gave an exceedingly interesting account of the life and activities of General Walker, second president of the Institute. The complete roster of those present at the dinner is as follows:

C. K. Allen, II; C. Auty, VI; J. J. Basch, X; D. E. Bell, XV; F. Bernard, VII; Herbert L. Bone, II; R. H. Catlett, X; H. V. Chisholm, II; E. M. Clark, II; I. B. Crosby, XII; C. M. Dean, X; John M. DeBell, X-A; J. E. Doherty, V; A. P. Dunham, II; S. Dunning, XV₂; H. P. Eddy, XI; A. J. Ferretti, II; S. Freed, V; D. O. Friend, X; H. F. Goldsmith, X; E. A. Gramstorff, IV₂; A. F. Hegenberger, I; G. W. Henderson, I; Lucius T. Hill, II; VI, XV₂; S. M. Lane, X; W. J. Littlefield, XV₂; H. E. Lobdell, IV₂; G. M. Lovejoy, Jr., II; John A. Lunn, II; R. J. Marlow, VI, XV₂; L. L. McGrady, XV₂; R. J. McLaughlin, XV₃; J. D. McManus, XV; Thomas F. O'Brien, VI, II; E. B. Payne, VI; Roswell E. Pfohl, IV₂; Edward V. Pollard, II; J. J. Powers, C. D. Proctor, II; L. S. Ray, II; R. K. Robinson, I; F. H. Rockett, VI; J. A. Rogers, II; T. W. Ryan, Jr., I; L. E. Schoonmaker, VI; Samuel Siegel, X; F. A. Stearns, II; R. S. Stevens, XV₂; H. S. Thompson, Jr., II; W. G. Whitman, X; Walter A. Wood, XV₂; W. C. Wood, X; J. T. B. Woodruff, II.

In addition, the following who were not present at the dinner there were in attendance at one or more other events:

David M. Brown, IV; Lawrence L. Clayton, XIV; S. W. Gurney, X, IX; Philip E. Hulburd, IV; E. H. Hutchinson, IV; I. W. Litchfield, '85 (Hon.); D. H. McLellan, IV; J. F. Maguire, V; H. L. Miller, VI; R. S. Moulton, II; W. E. Stuart, IV; Kenneth B. Toye, II, and L. E. Wyman.

Exclusive of the reunion we have, of course, as has been said many times, the usual number of casualties to report. From the Springfield *Union* we are informed that "Miss Edith Josephine Wells, daughter of Mr. and Mrs. James F. Wells of 71 Washington Avenue and John Hancock Babbitt of Akron, O., formerly of Northampton, Mass., were married on April 19." Johnny is assistant engineer in the maintenance of way department of the B. & O.

The *Newport News Herald* has the following about M. C. Lee, IV.

"Mr. and Mrs. Harry C. Gravely of Martinsville, Va., announce the marriage at their home Tuesday evening, April 25, of their only daughter, Hope Thomas, to Merrill Clifford Lee, of Richmond."

The *Brockton Times* speaks as follows of the wedding of L. B. White, VII:

"Miss Vera Augusta Jones of Eastondale, who recently graduated at the Goddard Hospital as a nurse, became the bride of Leslie Burrill White, also of Eastondale, at the parsonage of the First Baptist Church this afternoon at one o'clock. Rev. Thomas S. Roy officiated.

Miss Jones is the daughter of Mr. and Mrs. Clarence Jones of Sunny Brae, New Brunswick. Mr. White is a graduate of Clark College, Worcester, and of the Massachusetts Institute of Technology. He is employed as chemist for the Simpson Springs Co. He is the son of Mr. and Mrs. Edwin H. White of Eastondale."

The Home Office was invited to attend the wedding of Miss Christine S. Spofford, daughter of Professor Charles M. Spofford, '93, head of Course I, and Walter J. Beadle, II, which took place on June 3 in Brookline, and also the wedding of Miss Carroll B. Wright to Penn Brooks, XV, at The Highlands, Washington, on June 19. This latter was attended by Dud Bell and Ted Bernard, and our Washington correspondent informs us that Capt. H. M. Roberts arrived after the ceremony and stayed for a short while.

Deac Young is reported as engaged to Miss Evelyn E. Marsh of St. Paul, Minn. His address is now the Republican Building, Chicago, Ill.

The *Milton Record* gives the following information about Paul Dudley, VI:

"The engagement has been announced of Miss Eleanor Vickery, daughter of Mr. and Mrs. Herman Clifford Vickery of 70 Granite Place, East Milton, to Paul Fenno Dudley of 185 School Street, Milton. Mr. Dudley served in the Navy during the World War and was lieutenant-commander on the battleship *Arkansas* and the transport *Mt. Vernon*.

As may be assumed from the above account of the reunion, L. E. Schoonmaker is back in this country, having sailed from Antwerp on May 19 on the *Chateau Thierry*, arriving in New York about May 30. H. L. Rogers, I, is traveling in China at the present time and is not expected back for several months. Mail will reach him, care A. Rogers, Hyde-Park-on-Hudson, New York.

Several members of the Class have recently turned up in non-engineering lines. Bill Dean, II, who has been in the storage battery and leather business in Johnstown, N. Y., has recently branched to a new line and is the inventor and controller of the manufacture of the "Pat-It" powder puff. This device, which has been exhibited to representatives of the Home Office, is now marketed through a number of well-known department stores and by the Woolworth and Kresge interests. It has been officially tested and pronounced super-excellent, receiving the highest awards at the fifth year 1917 Wellesley reunion. Any members of the Class who are interested in this are invited to communicate with the Home Office or if samples are desired, to write direct to William F. Dean, care Golun Fur Novelty Company, Johnstown, N. Y., specifying as to whether they desire rose color or white samples.

Speaking of artistic lines, in the *New York Times* recently appeared an account of the annual exhibit of the American Academy in Rome at which the work of V. L. S. Hafner was exhibited, he being the architectural member of the first competing group on the collaborative problem of a plan for a musical center for the academy fellows in music. This prize is awarded by the Architectural League of New York and the awards are to be made next spring. The plans represented a month's close collaboration of painter, architect, sculptor and landscape architect.

The *New York Telegraph* speaks of Clark Robinson, IV, as follows:

"S. L. Rothafel, who always has one eye out for any available talent that may prove an asset to the presentations of the Capitol Theatre, has just added another light to his already distinguished personnel.

The latest asset is Clark Robinson, one of the most promising of the younger scenic artists of the stage, who has already made a bid for fame as designer of the stage settings for the Music Box Review under the direction of Hazzard Short.

Although this is Mr. Robinson's first venture on the stage of the motion picture theatre, he is by no means a stranger to the screen itself. A graduate of the Massachusetts Institute of Technology, he made his first contribution to the art of the screen as architectural director for 'Way Down East.' This opened the way to almost a year's work on the designing of sets for Famous Players productions. Subsequently he served in the capacity of art director for George Arliss in 'The Ruling Passion,' and in more recent productions made by that eminent actor.

Enhanced by the lighting effects of S. L. Rothafel, Mr. Robinson's work is given a sympathetic and artistic mounting, resulting in a combination of color, line and composition which for sheer beauty and artistry has very few counterparts anywhere, it is said."

The following appears in the *Washington Times*, the gentleman in question being none other than J. Paul Gardner, IV, formerly premier danseur of Tech Show and afterwards ballet master with Pavlowa.

"One of the stars of the Washington Opera Company's performance of 'Samson and Delilah' at Central High last Monday evening was Paul Tchernikoff, the director of the ballet and premier danseur. Mr. Tchernikoff came down from New York to direct the ballet and has decided to remain in this city and open a studio.

He has established his headquarters at 1731 I Street, the old William A. Slater house, now a studio building, and on Monday, March 13, is giving a house-warming tea. His studio comprises one of the charming drawing rooms of the Slater mansion and opens into the large ballroom. The two rooms are connected by a wide archway, forming an ideal dancing studio.

Mr. Tchernikoff is half American and is connected with the Gardners, of Boston. Though quite young he has travelled extensively and speaks four languages fluently. He is a graduate of the Massachusetts Institute of Technology. He has worked with Fokine and Adolf Bohm and, though original, works out his dancing along the lines they have laid down. He is planning a series of dancing matinees for next winter."

Prof. C. E. Turner, VII, of the biology department of the Institute, has been appointed a member of the Alumni Executive Committee of Bates College.

Leo I. Dana, VIII, is one of the men selected by the Board of Overseers of Harvard to be the recipient of a fellowship enabling him to study physics in Europe next year.

Just as we go to press, Jimmie Doon blew in with a 54 chest announcing that he wasn't the only Jimmie Doon in Natick, James William, Jr., weight nine pounds, having arrived three weeks ago.

1918

JULIAN C. HOWE, *Assistant Secretary*, 551 Tremont Street, Boston, Mass.

According to some of the letters we have received since the April issue came out, our work in that connection was appreciated by several members of the Class, and to tell the truth, we like it, for otherwise it's a pretty thankless job at best. We want to take this opportunity to thank the men who responded so well, especially those under secretaries on whom the burden falls the hardest. Do your part in helping swing the job by writing in unsolicited — you have no idea what a help that is, and it is only fair that you do something in the way of contributing, when you are receiving the combined efforts of us all.

We have just received notice that the REVIEW will be a monthly instead of a quarterly, after this issue. This is very agreeable news for a number of reasons. In the first place it will facilitate newsier news. With three months between issues, some of the news has had to be three months old. Most of it will be less than a month old after this. The REVIEW

will also be more efficient as a clearing house for class notices and general information — poor as it is, we feel it is the best we have at present for that purpose or can have, considering our financial condition.

Next year will be our fifth year out and the logical time to think of coming back to a reunion of the Class. To be sure that is a year away, but it is none too early to begin thinking about it, talking it over with other 1918'ers and if the majority want one, decide what kind we want, so that those in charge can go ahead and have a good one and put it over right. Talk it up among yourselves and let your course secretary hear your views by September 1, so we'll have something to work on. Now for some news.

Course I, J. R. LONGLEY, *Secretary*, 39 West Adams Street, Chicago, Ill.

Bob contributes the following:

Here's a line from George "Shorty" Thomas, I, from Lowell, Mass.:

"I noted with pleasure, how our Class News had increased in the last number of the REVIEW. It certainly seemed fine to hear about some of the fellows. Let's keep up the good work. My story is not very startling, but such as it is, you are welcome to it. I was released from the *Royal*, United States Navy, in February, 1919 as an Ensign. I went to work for the Locks and Canals here in Lowell for about six months, worked at Camp Devens as superintendent of sewers for six months, and then went to work for John A. Stevens, a consulting power plant engineer of this city. I have been with him now a little over two years. My first year I spent in Cleveland, Ohio, and liked that city very much. Last November I had occasion to go to Rome, Georgia. I went by way of Cincinnati, and on my way to Cleveland met Kilduff. He told me he was working for the Gray & Davis people in Amesbury, Mass., but was then on his way to Indianapolis. The power plant business is very, very dull at present and I am looking about for another job, and take it from me, engineering jobs are scarce in New England.

I am not married yet, and have no immediate prospects. For that reason, which I guess is sufficient, I can send no pictures of youngsters, much as I would like to. I don't think I've shrunk any in height, and my waist line has increased considerably, but I haven't broken any scales as yet. As for other fellows in Course I, here is some dope you may know already. Putnum is married and has one child. He is somewhere in the Middle West. I understand Kilgore is with the Massachusetts Highway Department. I thought I had some more news, but it was in the last REVIEW, so it's no use. Give my regards to any of the fellows you see or hear from."

Jack Purves, I, is in Clinton, Mass., and writes as follows:

"I am afraid I have neglected old 1918 pretty much. In fact I have felt sort of an out-cast from it. During the summer of 1918 I came back to Tech on a special furlough, and completed Course I with the Class of 1919. Then after the Armistice I took mechanical engineering with the Class of 1920, graduating with them. All of this makes me a sort of mongrel, nothing in particular, though back in my heart there is a very warm feeling for 1918, and the crowd at the surveying camp.

I am at present with Lockwood Greene, who are cotton mill owners and also engineers. For a year or so I was with the engineers, but since last August have been in Clinton at the Lancaster Mills learning the mill game from the ground up, with the accent on the 'ground.' But most important of all I am to be married on June 24 to Miss Mary Temple Bradley in Springfield, Mass. I saw Wirt Robinson about a month ago. He is working in Canajoharie, N. Y., with a company that manufactures paper and cotton bags. He is married, and is the father of a girl a few months old."

Dave Rubin is the second of our Course I men we know of, to join the ranks of the teaching profession. He gives us an account of his adventures:

"Upon getting out of the service I held down a job as superintendent of a braiding factory. About the first of January, 1920, I was given a chance to get into the engineering line, and went to work for Stone & Webster. I made fairly rapid progress with them, and it was on their recommendation that I was given a position as instructor at the Boston Trade School. I left the latter place on January 3 of this year, to accept a position as head of the drafting department of the United States Veterans' Bureau Vocational School. I find this work most interesting, for the students are all disabled veterans, and most of them appreciate the hard work that I am putting in. You would be surprised to see the progress we make with a group of raw doughboys.

If Julie Howe were answering your letter for me he would say that I am not all married

yet. I am fortunate enough to be able to announce, however, that I am engaged to Miss Ruth Ann Levin, an Emerson College graduate, and a sister of a Tech man. Since she is also a teacher and her family is related to Tech, you can see for yourself that at least she fulfills the requirements as laid down by the late Professor Sedgwick in his Sanitary Science lectures. No date has as yet been set for our wedding. Please remember me to the boys when you write to them. Thanks again for your letter. As ever, DAVE.

— Dave's address is 148 Shore Drive, Winthrop, Mass.

We are indebted to the *Brockton Times* for the following news of F. H. Hopkins, I:

"Mr. and Mrs. H. A. Davenport, 33 Essex Street, announce the engagement of their daughter, Miss Marie Alden Davenport, and Frank H. Hopkins, son of Nate Hopkins of Rockland. No date has been set for the nuptials. The prospective bride is employed in the offices of the United Shoe Machinery Corporation, and is a member of the South Congregational Church. She is a graduate of the local schools.

Mr. Hopkins is a graduate of the Massachusetts Institute of Technology and is connected with an insurance company."

COURSE II, SAXTON W. FLETCHER, *Secretary*, 31 Union Square, W., New York City.

Sax really got going this trip and sent in a lot of news, more nearly representative of his course. We appreciate it, too, Sax, you can bank on that. He writes as follows:

"I believe it is about time for me to send you a little dope if you are to have it for the July issue.

Ken Burgess writes that he is with the Hope Webbing Co., Providence, R. I., having Ohio and part of Michigan as his territory. He says he's still single but is expecting to join the ranks in the fall. — E. S. Carter has been transferred from the General Electric Company in Lynn, where he spent two years, to the Power and Mining Department in the Schenectady plant. He is married and is living at 215 Brandywine Avenue, Schenectady, New York. — Byron Cleveland says he's growing more slim and more handsome yearly, and incidentally gives us a boost on the last issue of the REVIEW. He writes as follows:

"I wish someone had warned me about the 1918 section of the last number of the Bulletin. Due to tennis, a garden, daylight saving, and a few other things I rarely start to read until quite late in the evening. The Class news has always, hither-to-fore, been something for a spare ten minutes. Innocently enough the other night I picked up the Bulletin and turned to the favorite section and started to read. I read and read and still I read. Some marathon to read it all at one sitting, but I did it. Now who is going to pay for my loss of sleep?

I can give you little news of former classmates of ours, but here is the little I can give. O. Gay Hugo is now back home in Texas ranching and recuperating. In spite of ailments he has done well since leaving school, being the proud father of a beautiful baby girl. (I quote from his description of the child.) P. W. Carr is now with the Pejepscot Paper Co. In what capacity I do not know but it must be a good one, he has the happy faculty of improving his position every time he makes a move and he moves now and then. There is a 1918 Course II man here in Lawrence. He works in the mill of the United States Worsted Co. We used to be friends but we aren't any more. His name is Fiske. He has been here a year or so and if I ever see him, he promised to call on me shortly after he came here, I'll have some more to report about him.

In regards to B. R. Cleveland, he is doing nothing for a living besides enjoying himself. Who does not find pleasure in his work? He is still with the J. H. Horne & Sons Co. learning how to build paper mill machinery. He used to see Bunny Pinkham once in a while but Pinkham stopped coming to the factory after three or four useless attempts at trying to sell him oil. No reflections on Pinkham's ability as a salesman, you see Cleveland was not the purchasing agent and he would never let Pinkham get to see him. Now I have given away Cleveland's position with the Horne Co.

I am still single but I have hopes, for I am yearly growing more slim and more handsome.

Harold Fitch came across with a long letter, stating he was married a year ago to Miss Margaret Crocheron of Mt. Vernon, N. Y. He was with the Eastern Manufacturing Co., at their paper mill in Bangor, Maine, for eight months and for the last two years has been assistant engineer in the department of tests of the New York, New Haven and Hartford Railroad. He complains of having seen no Tech men and cordially invites anyone who happens to be in New Haven to drop in to see him. His office is Room 307 of

the R. R. Station and he is living at 469 North Main Street, Wallingford, Conn. — He says he used to hear from H. L. Miller and 'Bunny' Pinkham but no more and guesses they are both dead. I say they are too busy making money, from all the reports I get, especially 'Bunny.' — A. L. Hamilton is representing our Class at the Tech Club, where he holds down the office of Library Committee, where he is generally working, when not playing bridge. He has one of those jobs that begin at nine-thirty, judging from the time he arises in the morning, after we hard-working people have been hustling for a couple of hours.

I ran into Herb Polleys in New Haven a while ago. He is married, living there and working for the United States Rubber Co., in their machinery department. — Ev. Rowe dropped in to see me the other day and he seems to be 'knocking them cold' both in business and socially. He is with the Mutual Life Insurance Company at 1 Madison Avenue. Within the last two years, they have formed an industrial engineering department for the use of their clients and Ev. is in charge of the cost finding and production part of this department. His work takes him on extended trips throughout the country, and he is getting lots of experience and making innumerable influential friends. — Since my last letter I have become a commuter and am living at 67 South Broadway, White Plains, N. Y. It sure is great to get out in the country after a day's work."

COURSE III, CHARLES H. WALT, *Secretary*, care American Zinc Co. of Tennessee, Mascot, Tennessee

We wrote Chink twice reminding him of the due date but as yet of no avail. We haven't even heard he is in Alaska this time — does anyone know what has happened to him? The best we can offer is a letter from Pete Sanger which came direct to the assistant secretary. According to Pete's letter we judge Chink has been on the job but is late getting his dope to Boston. If it arrives in time, we'll shoot it in, otherwise we'll have to wait till November for an account of Chink's travels. Pete writes as follows:

"Just received an old-time war whoop from Chink Watt. He's on a rampage again. You remember what a wild customer he was at Tech so I know you will hardly blame me for hastening to comply with his wishes. Seems that he wants me to tell my life history, to pull all the skeletons out of the closets, anything to create excitement.

My story reads more like the description of a wild ride on the 'chutes' but the scenery was wonderful so I have had considerable compensation. Are we downhearted? No!!

After leaving the Stute I journeyed out to the wild and woolly state of Montana and assisted the Anaconda Copper Company in the scramble of producing copper for war purposes. Here's where we board the 'chute.' In September, 1918, I was offered and accepted the position as chief engineer of the Winona Copper Company at Winona, Michigan. Prospects as well as conditions at that time were good, so I 'went and done it' as they say down East. I took along a teammate on December 23, 1918 and on January 15 — three weeks later — notice came to close the mine. Sort of from the sublime to the ridiculous. Then came another scramble only this time it was to hunt for a job. I did some research work for the mining professors but it wasn't until May, 1919, that anything real came along. I was appointed assistant valuation aid for the Treasury Department and located in Pittsburgh. Along in October of that year I received a little 'billet doux' from the boss to the effect that 'owing to changes in the plans of the department my services would no longer be required.' Honestly Julie, I think I was fired, yet I have no proof of it. Must have been because I am a Republican and the party in power was a Democrat.

Then I went West to Montana again for a mining company, but found upon my arrival that the whole proposition was a fraud. I didn't stay with that company long I can tell you. Digression No. 2. We've reached the bottom of the slide. While out in Montana I received an offer from Hayward and Schleicher, consulting metallurgists, at Tech to come on with them. This time the old adage about 'sublime and ridiculous' is reversed. I accepted and enjoyed fourteen months work with them. The last eight months were spent in New Jersey. In April of last year the work was stopped and I was again on the outside looking in. However I soon connected with the company at whose plant we conducted our experiments. Digression No. 3. I only stumbled while climbing out — only one ride on one ticket. So no more 'chute the chutes' for me. I was with this company for a while as a chemist and was then transferred to the metallurgical department. A year ago today I entered their employ and on Thursday the eighth I start in

work that I believe will be work not only interesting, but full of excellent opportunities. I am to represent in the east a trade paper called the *Rock Products*. This paper caters to the non-metallic mining industries such as cement, lime, sand and gravel, etc. My particular job is to solicit advertising from the various manufacturing concerns. As my territory includes New England, there are strong chances that you and I will have lunch together when I swing through Boston. Perhaps I can get the Boston Garter concern to place an add. Why not? All men either wear or ought to wear such pieces of apparatus.

Now for the best of all. I mentioned getting married. I believe that you have met the young lady. We have a little girl named Barbara. She is two and one-half years old. Guess she takes first prize among the miners anyway — first prize in regard to priority; in all other points, she takes first prize without a contest.

As for the other miners, Halfacre is still with the New Jersey Zinc, Turner is traveling freight agent for the Texas and Pacific Railroad, with headquarters in Pittsburgh, Chen is in China, just where I do not know. The one or two others I know nothing about.

Here's hoping that the REVIEW will be more successful than ever. Please remember me to any of my friends and with warmest personal regards."

COURSE IV, R. B. WILLS, *Secretary*, 653 Franklin Street, Melrose Highlands, Mass.

"Having gotten out our old pipe and typewriter, the editing department of the 1918 Architects now sits down to write the news which has accumulated since the last issue. There seems to be rather a dearth of letters in our mail bag but by means of unstinted effort on our part we have managed to drag quite a scandal and whatnot out of the various architects whom we have met, bumped into or lunched with.

Among those of our members who are summering abroad are the following. Samuel V. Chamberlain of Boston and Paris, Kenneth Reid of Boston, Amory L. Williams of Woodstock, Vermont, Harold C. MacLaughlin and Eric W. Drury.

Drury gives his latest residence before going abroad as Atlanta, Georgia, so we are probably safe in saying that that was Mac's last address too. — Ernest A. Grunsfeld, Jr., of 151 West 86th Street, New York City.

Sam Chamberlain after creating quite a reputation for himself as an artist and delineator of perspective drawings here in Boston, went West to his old home town in the State of Washington after which, from devious sources we learned, that he had opened a studio out there. He was doing well with his studio out West but the lure of the old world and Paris must have proved too strong for him, for the latest we heard and from no less a person than Bruce Riddell, was that Sam's name had been seen on the register of one of the famous hosteleries of the French Capital. — Ken Reid after declining from long descriptive letters to short and snappy, newsy ones, has still further declined to postcards but those, thank goodness, have come in rather regular and chronological order so we at least have an idea of the old boy's whereabouts.

The postcards run as follows. March 16, 1922, Athens. Picture of the Erechtheion.

'I am sitting beside one of the Caryatids but she is not at all flirtatious. Get a great kick out of it though, stopping here four days and will send some pictures later.' — Evidently later hasn't arrived for we're sure that the pictures haven't.

Venice, April 8. — 'Stopping here for one day but will be back later. Wish I was a millionaire and could buy everything I see. It would cost a lot.' — and then another from Napoli, no date. — 'Just came down here for a week after a wonderful month in Rome. Went sailing on the Bay and found it quite up to specifications.' — and the last one to Pete Woodland from Ravello — nothing on it.

H. C. MacLaughlin sends in the following letter describing a meeting of the Technology Architectural Club of Florence, Italy.

'Having received your letter some time back I elected myself to report the following affair.

The annual dinner of the Firenze (Italy) Massachusetts Institute of Technology Alumni Association was held — I mean consumed — on the night of April 21 in — I don't know the name of the restaurant, but it's the one in the basement of an old palazzo (pronounced with a "t" as in catsup) and you reach it by going down a dark stairway from a side street under dusty shelves, where the fat-bellied chianti bottles in their little basket covers are like rows of hula-hula girls in grass skirts. Oh boy! The sight of that stair — calm and dignified and hospitable-like, just as though there never had been an eighteenth amendment would drive Volstead to drown his despair in Owieto bianco. Well,

when you've got your seats in a little low room whose vaulted ceiling is papered with flaming posters so that the smoke from your cigarette curls up to tickle the nose of a great crimson centaur who curves across the ceiling to bow to you and a little further over, above the smoke clouds like an Olympian goddess, you see a lovely lady bursting from a yellow bomb with a bottle of Vermouth in her hand. Well, just then the music starts up. Real music, I tell you — but you should see the gang that produces it. A fat old fellow like an Irish potato, but with a voice that is second cousin to Caruso's and a big double string guitar; a tall fellow with a pointed bald head and drooping black moustache and a mandolin; and a third old fellow like a sack of rags who sits and plays a concertina. You will hear this team at the Olympia the first season after Marcus Loew finds this place.

After these few dabs at local color, I now get busy like a society reporter and state that among those present were: W. J. Tallman, '15, and wife; Louis Rosenberg, '13, and wife; Crowell, '16; E. W. Drury, '18; H. C. McLaughlin, '18; Seaver, '21, — all Course IV.

The special guest of the evening was Miss Gale, an architectural graduate of Columbia University.

The above gang are not travelling together but are nearly all following the same chronological schedule and expect to be in Paris by mid-summer and England in late summer.

Hoping this reaches you in time to be of some use.'

We nearly fell over when a letter came in from Grunsfeld a month or so ago. Correspondingly speaking we thought he was out of it. Grunty has been roaming around the old world for two years now, and thoroughly enjoying himself we'll bet.

Here's his letter:

'If I weren't such a rotten hand at letters I'd have written you an age ago. But I am; I shirk every opportunity of using my pen except for sketching, which is the only explanation I have to offer.

The most important news, which I imagine you've heard is that Ken has quit India and arrives in Venice tomorrow, I believe. I've just written him and am hoping to see him although the present finds me tied down at the Ecole in Paris.

I've been over here almost two years, and I think were it not for a small spark of ambition left in me I should never want to come back, although that's a slight exaggeration. The casual, free and easy life "gets to you" and it's hard to think in terms of a routine life. Fortunately though, I don't mind working, and travelling cannot be offset by its many inconveniences. So I've done a lot of both. In fact I just came back from Tunis and Algeria where I spent a very pleasant while with Keach and Rosenberg. Before that I had been several months in Italy, moving around and then at the academy in Rome where Williams, Keach and myself were putting the moulding gauge on a lot of buildings that should be old friends to you. On the side I'm making lithographs, water colors, and pencil sketches, — they are all amusing and fairly essential, — but I believe the important thing is just living over here and getting all one can of the rather wiser and more tolerant European life. That's the tragic part, coming back — and my days are numbered to the tune of three hundred and sixty-five.

I've heard fragments of your doings, — but not nearly enough. I think if Mrs. Wells and you could gather up the courage and everything else necessary and come over, you couldn't regret it, — even for a summer.

Do drop me some word of yourself; my antipathy (it amounts almost to that) for letter writing may have fooled you into thinking I had forgotten all about you — but I have wondered what you were up to. As ever, *Grunny*.'

Well, that about covers the crowd on the other side of the water, now for a few items on those around here.

Follows a letter from Sumner Wiley, dated May 19.

'I had despaired of ever finding time for a letter at home — hence this during the noon-hour in the office on office scratch paper.

About two months ago I found another job, so am now working for the Dwight P. Robinson Co., engineers and contractors. They occupy the ninth floor of the Grand Central Palace, two blocks north of the station. And would you believe it Bill, I am on straight architectural design and drafting. Didn't think we could get away with it, but you see necessity is the mother of invention. Some sweet day not so very far hence I'll be at engineering again either here or somewhere else.

Sometimes I think I'd like to own a country store and live the life of Riley out where the blue birds grow. (So would we Sumner, so would we.)

We are wondering how big Billy Jr. is? Does he talk and walk and play the mischief with your magazines and spectacles? (He do, Sumner, he do.) Our kid has all the motions in form but she doesn't walk by herself yet. She also does a whale of a lot of talking without saying much."

That sure is a bouncing baby of Sumner's which you all can see for yourselves, if our famous baby page comes out in this issue.

Sorry Bill, but not enuf pictures arrived for this issue. We hereby urge one and all to send in pictures of their youngsters right away, so that baby page can materialize for sure, in the next issue.

And then no longer ago than last Friday, whom should I catch up with, but the one and only Donald Chapin Goss striding along to catch the 5.14 out of the North Station. Don has a young flapper, a year and two months or so old, that's why he always hurries home so early. You have to keep your eyes on the younger generation these days, they begin to step around at such an early age.

Don has been with Guy Lowell, architect, for the past two years. He is now spending a lot of time on the design of the memorial buildings at Andover Academy.

We rise to announce the only real news of the issue:

On April 17, 1922, Dave Reed was married to Miss Margaret Wilkins of Newton Center, Massachusetts. Dave and Mrs. Dave are now living in Boston, right up on Beacon Hill so close to the office of Maginnis & Walsh, where Dave works, that he can pike right home for a hot lunch every noon; pretty soft for some people we'll say, what?

Herb Hatch landed in town last month and picked a nice berth with Thomas M. James, Architects and Engineers. Herb is living at home in Brockton."

Bill sent in a note too late for the last issue to the effect that Sam Fuller has a baby daughter, Eleanor, seven months old. Let's have a snap of her Sam — she's safe even with 1918 at that age.

Course V

The following clipping was taken from the *Boston Globe*, May 28, 1922:

"Mrs. Jennie Willey of Main Street, Wakefield, announces the engagement of her daughter, Ruth, to Mr. Donald Wales MacArdle, son of Mr. and Mrs. Fred W. MacArdle, 27 Sherwood Street, Roslindale. Miss Willey is a graduate of Salem Normal School, where she is now a teacher. Mr. MacArdle is a chemist, Massachusetts Institute of Technology, Class of 1918. No date has been set for the wedding."

Here's the kind of response we like — an unsolicited letter from Arthur Barnes, V. Would that we had more of them.

"I have made a combined business and pleasure trip through every state east of the Rockies by automobile, having covered ten thousand miles. At the present time I am spending the summer in Colorado Springs enjoying the climate and scenic wonders of Colorado.

In the fall, I am planning to continue my tour to the Pacific coast via the southern trails and visit California during the winter. My return trip East will follow the Lincoln Highway, seeing everything of interest. Total mileage covered when tour is complete will be in the neighborhood of twenty-five thousand miles. Please keep my mailing address at Meriden, Conn."

COURSE VI, JOHN R. POTEAT, 38 South Dearborn Street, Chicago, Ill.

Jack certainly made good this time and I take back all I ever said about him. He writes as follows:

"I got off a few letters on the sixth of the month and I'm going to throw the replies in shape as they are received — hence the lingering date on this letter. Letter No. 1 was received from Harry Upson Camp who, after leaving the Institute, pursued the way of a pedagogue at Phillips Andover for two years and then landed with the Employers Liability Assurance Corporation, Limited, in Boston, as a claim adjuster when he came to earth. But the balloon is due to rise again, ere this goes to print, for on the twenty-sixth of June (which by the way will be my second wedding anniversary) Camp will be married to Miss Adra C. Powers, a Mount Holyoke graduate in the Class of 1921, and, more to her credit, comes from Worcester. Strength to their elbows as they take the oars together.

Letter No. 2 comes from Stephen M. Foster, and he starts it off by telling of his mar-

riage on December 3, 1920 to Helen Florence Silver. I suppose a course in electrical engineering is good for a person in the grocery business because they have to deal with bulbs, plants, currants, and the like — but true enough the construction department needs a man like Foster and so he is there with Francis H. Leggett & Co., wholesale and manufacturing grocers, New York. Business is good — must be because he lives in Flushing, Long Island.

Letter No. 3. The president and treasurer as well as manager, stenographer, office boy and stores clerk, — at least I suppose he's all these to the Keystone Engineering Co., for he says he's in a mess — is Yale Evelev. He says he is happy and busy.

But letters came in so thick and fast that I lost count. — W. C. Foster is with the Pressed and Welded Steel Products Co. of Long Island City and he'll make anything for you so long as it's made of sheet steel. — Eli Berman is still in Dorchester but is not married yet — he's open to suggestion. He runs the Boston Radio Co. and is riding the three hundred and sixty-meter wave of prosperity, hoping to "meter" soon, to correct his single state. — P. S. Shelton has been on the Pacific Coast since November, 1921, but is now in Alaska and will return in August. I think I'd be inclined to stay there through August and come back, say in October. — Aaron Goodman thanks the Lord that he hasn't taken any Russian rubles. Being a sales engineer in New York he spends most of his time sailing the subway. He says he hopes the other fellows will contribute their own few volts of ego with a resultant aggregate boost that will make Course VI well accounted for this quarter. — Ed. Newton is a banker with Harris, Forbes & Co., Boston. Being a banker he can of course afford to be married and he did marry, November 19, 1921, and Helen West, as he says, of the East, is the girl — I'd say he's gone West. Says business is good, but why shouldn't it be for a banker. — M. A. Lancks was for a while out here in the West working for Sandpecco Veneer Co., in charge of several plants, and he reports himself as happily married to Miss Catherine Saxe of La Grange, Ill. He wants another year before reporting any little Lancks. Now he's in the glove business at Gloversville, N. Y. He reports Fred Lane as doing research work for a power company in Michigan, Jack Kennard on special work for the A. T. & T. in Chicago and Mal Eales and Bill Costello with the A. T. & T. in N. Y. — A. G. Carlson is employed (he didn't say whether he is working or not) as an engineer with Improved Risk Mutuals in New York, where Commissioner Enright says it's as safe at midnight as at noontime provided your life isn't worth anything. He weeps over two attempts to slip into the matrimonial column of the *New York American*, the latter of which almost brought him into the obituary column. But he is still gunning and must know a lot about his business because he doesn't mention it. — Howland Fisk went into the Coast Artillery Corps during the war and now he's a member of the B. A. R. He has worked a while for the Northwest Engineering Co. at Green Bay, Wis., and then went back to the State to get his degree in Course I. I can't help but regret that he accomplished such a defection as to go over to Course I, but his duties in Course VI should make it easy for him to get his degree this summer. — George Elz is a construction engineer for the R. B. Wolf Co., in reconstruction of a boiler house at Newton Falls, N. Y. He just bought a flivver sedan with which to commute to Lake Placid and confesses to a helluva time trying to learn to drive it. He has no jokes on himself except the flivver."

COURSE VIII, E. O. HERMAN, *Secretary*, care Tiffany Enameled Buck Co., Mommence, Ill.

Not a word as yet, but hope to hear in time to shoot it in.

COURSE X, WILLIAM P. RYAN, *Secretary*, care Eastern Manufacturing Co., Brewer, Me.

Bill came across again in fine style and has earned the name of one of the dependables who keep you going when others are falling down all around you (sounds like a Meuse-Argonne story, doesn't it).

This time we have collected some news of fellows not previously heard from, but in general most of the letters were from the faithful Old Guard.

Shorty Carr writes from Lisbon Falls, Me., that he has been with the Pejepscot Paper Company since June, 1921. This company is one of the large pulp and paper producers in Maine, and at present is offering a student course in pulp and paper for recent college graduates. Shorty is actively engaged in this project and says the work is very interesting.

Bob Van Kirk has charge of the sale of dyes to all pulp and paper mills in New England

for E. I. duPont de Nemours Co. Accordingly we see Bob about once in six weeks, and gather considerable information about our classmates. He says that Saunders is doing research work for the Edna Explosives Co., Wilmington, Del., and that Hans Roessler is married and living near Los Angeles. We want to take back the insinuations we made about Bob writing a letter in Providence and mailing it in Newton Center. He has produced evidence that his folks are living there, so we accept his word for it that he was visiting them.

Johnnie Abrams came through with a young newspaper, illustrated by pen sketches such as used to adorn the margins of the *Boston Herald* he always carried (and never read). Doc missed his calling — he should have been an artist. He has been with the Pacific Petroleum Corporation, Huntington, Cal., for the last year, holding down the title of assistant engineer. He staggered us with some data regarding the recovery of casinghead gasoline from gas by counter current scrubbing with a type of straw oil; apparently Doc is in for some high brow calculation of coefficients. All in all his letter sounds fairly reasonable (knowing Doc) except the statement "at 6.30 A.M. every morning I make the rounds for samples of oil from each well, and test for gravity, sand, water and emulsion." Imagine him getting on the job at that hour. He reports that Frank Travers is located in Los Angeles selling securities, and comes down frequently to get a square meal of home cooking, in return for which "he helps paint, dig the garden and wash dishes."

Speaking of oil millionaires, Dutch Engelbrecht writes from Cyril, Okla., that "I am still single and haven't had a serious thought since I managed to finish my thesis. I kind of like this country because we have mild winters and because they make a millionaire about every other week." Dutch says when you hear of the Engelbrecht Oil Co. climb on board for you can't go wrong (confidential information to 1918 men only).

Shifting the scene to New Haven, we observe Stew Boyd as chief chemist of the central laboratory of the footwear division of the United States Rubber Co. at the Candee factory. Stew says he spends about half his time on research and the rest on specification and control supervision. On October 2, 1920 he married Miss Beatrice Ray of New Haven; evidently married life agrees with him for he now tips the scales at one eighty-five. He sends in the information that Howard Cyr was married over a year ago and is with the New Jersey Zinc Co. at Palmerton, Pa.

A wedding of much interest was that of Cliff Bellis to Miss Thelma Ekwall on May 11. Now we know why Cliff and George were so inseparable in the old days. — Ben Franklin beat Cliff to it by a month for we have received an announcement of his marriage to Miss Louise Jane MacNaught of Providence, April 7. Ben is with the United States Finishing Co. of that city and is learning the business. — Phil Dinkins sent in a very brief letter with the promise of a longer one in return for some samples of pulp. As yet we haven't had time to send the samples and so haven't received his letter — fifty, fifty. He is with the Dorr Co. in New York and we judge is doing sales engineering work. — Joe Kelley writes from Fall River that he is with the New England Refining Co. working in their new cracking plant. He says Bill Hartley has been in Milwaukee for three years; must be that Bill still has hopes of getting some of the liquid that made the city famous.

Rip Porter got conscience stricken and sent in a full report from September, 1920, to date. He is in the research laboratory of the Carborundum Co. at Niagara Falls. He was married in Cleveland, January 1, 1921, and is now living in La Salle just outside the Falls. Rip doesn't say much, but if anyone has a finer looking daughter than little Miss Porter he wants to be shown. Once again we appeal to the fellows to send in pictures of the family group, following the good example set by Bennie Whorf. We suggest a baby show in connection with our reunion next June and nominate as judges Bob Van Kirk, Packey MacFarland and Jim Todd, unless when we hear from Jim we find he is going to enter a candidate for the silver cup himself.

Dick Wilkins is coming to South Brooksville, Me., June 26, for the summer, so we hope to secure a picture of young Bill. Dick bawled us out for making a terrible mistake in the last issue, William's birthday is June 27 not May 27 as reported. He furnishes the information that Van da Linda is in Cincinnati, married, and has one daughter.

Tom Kelley replies to Earl Collins by stating that he is no longer with the Glidden Co. and therefore not responsible for their product. Tommy adds that he "saw the criticism of (one of our classmates, not Earl) in a recent journal about one of the products manufactured by the company I was formerly with. Despite the fact that he once did honor to Course X, he evidently tried to reduce the shellac in question with water instead

of alcohol, and consequently threw the gum out of solution. The manufacturer cannot be held responsible if the consumer does not read the directions for use. Now let's hear from the party of the first part.

Tom is now sales manager for the Lilly Varnish Co. of Indianapolis. He will make a trip to Boston to marry Miss Madeline Rowen, Simmons '18, June 21, and we hope to see him at that time. He writes: "I certainly was glad to get your news-mongering circular (nice compliment to our literary efforts). Although the fatal step has not been taken, the wedding bells will ring before the July issue of the REVIEW is out. I cannot quite figure out how the news travelled so quickly, but the young lady in Bangor had the correct dope." We quote this last to prove that we will get the inside information anyway, so you might just as well send it in direct and get it straight, otherwise we are apt to slip on little details of dates, names, etc. Tom gives a very vivid account of his city, but as he has to live there and as the REVIEW might fall into the hands of some loyal citizen we refrain from publishing all of it, and will merely quote one mild section — "They also produce down here the greatest crop of tobacco chewers *exant* (shows signs of early Latin education). It seems that the babies cut their teeth on the old cut plug and by the time they have grown old and are ready for the undertaker they are so saturated with Lady Nicotine that they do not have to be embalmed."

News from the Keystone State says that Packey MacFarland's Packard roadster has been seen breaking records on the roads about Tamaqua. There was also something about a little red schoolhouse on the hill but we didn't get the point. When questioned he denied that he had been receiving inside tips from Babson's Institute but the unmistakable signs of prosperity and certain evidence we have, indicate otherwise. Anyway we hope to see him in Maine this summer.

While in Dr. Lewis' office at the Institute last April we saw A. C. Walker. Johnnie confirmed the rumor that he is studying for a Ph.D. at Yale which he expects to receive next June. We suggest that Cliff, Stew and Johnnie get together in New Haven and form a local 1918 Course X association.

Harold Weber refuses to write, but we noted his name linked with that of Dr. Lewis in an article on distillation in a recent issue of the *Journal of Industrial and Engineering Chemistry*. Evidently Johnnie and he were in the service for we have a message for him from A. C. regarding "2d Loots" — anyone who has been a second loot knows what it is.

Waldo S. McGuire was married to Miss Muriel Butler, June 6, at Mt. Vernon Church, Beacon Street, Boston, by the Rev. Sidney Lovett, assisted by the bride's father, Rev. William H. Butler of Cambridge. Mrs. McGuire was formerly a member of the faculty of Mt. Ida School. Mac, as reported in the last REVIEW, is located at the Rhode Island State College, Kingston, R. I.

COURSE X ADDRESS CHANGES

Percy W. Carr, care Pejepscot Paper Co., Lisbon Falls, Me.; Walter B. Engelbrecht, care Cyril Refining Co., Cyril, Okla.; Stanley H. Franklin, 48 Hillside Avenue, Providence, R. I.; Thomas P. Kelley, 617 East Drive, Woodruff Place, Indianapolis, Ind.; Garnett H. Porter, 12 Pacific Avenue, La Salle, N. Y.; Stuart M. Boyd, 365 Third Avenue, West Haven, Conn.; Robert W. Van Kirk, Jr., care E. I. duPont de Nemours Co., 274 Franklin Street, Boston, Mass.

COURSE XI, NELSON A. BOND, *Secretary*, Waldoboro, Me.

Not a word from Nel as yet but still have hopes.

COURSE XV, CLARENCE E. BASSETT, *Secretary*, Y. M. C. A., Providence, R. I.

Clarence must be very busy selling pickles for his dope was limited to the story of John Damon's wedding which follows:

Miss Helen Whittemore Harlow, daughter of Mr. and Mrs. Robert C. Harlow of this town, was married tonight to John Warren Damon, son of John H. Damon, also of Plymouth, at the home of her parents. The Rev. C. F. Andrews of Kingston performed the ceremony.

The bride is a graduate of Walnut Hill School, 1918, and of Miss Wheelock's Kindergarten Training School, 1921. Mr. Damon was a member of the Class of 1918, Massachusetts Institute of Technology, and served with the engineer corps in the war. He is now with the Electric Storage Battery Company of Boston.

1919

E. R. SMOLEY, *Secretary*, 55 Hanson Place, Brooklyn, N. Y.

P. D. SHEELINE, *Assistant Secretary*, 55 Magazine Street, Cambridge, Mass.

In going through the list of members of our Class, I was surprised to find that only one hundred and twenty are members of the Alumni Association and receive the REVIEW. This gives all of us a good chance to help build up interest and spirit by getting the rest of the Class to join and to receive and read our column. Every time you meet or write a '19'er, remind him of the REVIEW notes.

M. C. Balfour writes while On the High Seas, May 1, 1922, as follows: "Your letter was mighty welcome and certainly deserved a reply a little more prompt than this one. I have worked hard (at times) but that's old stuff and not a good excuse.

I am just writing this note to say that I have concluded my services with the Red Cross and Mrs. Bal and I are on our way home, apparently for some time, as I am planning on beginning medical study in the fall.

I feel very much out of touch with things and will look to you for a lot of news. Having been delinquent about alumni dues, I missed several numbers of the REVIEW.

The last time I wrote, I believe, was during my term as a 'literary' man, as you call it. Since then much has happened and I've skipped round most of Europe with the exception of Russia and the Balkans. More of this hereafter.

I expect we'll land on the fifth or sixth. I will call at the Tech Club for mail or messages and expect to be in New York till about Tuesday the ninth. Sincerely, Bal." Address: 126 Main Street, Marlboro, Mass.

Daniel C. Hall, June 4, 1922: "Your card requesting news of '19'ers received, but I do not think it applies very much to me for I have had bull in the last two issues. However, since writing last I have made another change of employment and address. I am now back with the New Jersey Zinc Co., Palmerton, Pa., having resigned my position as principal of Capron High School, Capron, Pa., last April. Wife and I are now keeping house here in this beautiful section of the Lehigh 'Walley.' Trusting the REVIEW column may be lengthened by others, whom I would like to hear of, and wishing to be remembered to all '19 men you see, I remain, Yours in '19, Dan." Address: 634 Lafayette Avenue, Palmerton, Pa.

Russell Hamilton, May 19, 1922: "I noticed in the TECHNOLOGY REVIEW that F. L. Hunter was present at a dinner at the Technology Club in New York. Could you send me his present address? I am still here on the job enjoying the Cape even more than ever. Although engaged, I am not married yet, but hope to be in the early fall. I received the announcement of the marriage of Miss Olive Amsden of Allston, Mass., to Mr. Holden C. Priest of Brookline on May 6, 1922. This may interest you. I don't see many of the boys down this way. Wish I could. Sincerely, Russell Hamilton." Address: Tremont Nail Co., West Wareham, Mass.

D. B. Joubert, Home Address: Long Street, Montagu, South Africa. Business Address: Department of Chemistry, University of Stellenbosch, Stellenbosch, South Africa, Lecturer in Chemistry. Received Ph.D. in Chemistry at the Institute in 1921 and am commencing duties as Senior Lecturer in Chemistry at the University of Stellenbosch, in February, 1922. — Oscar deL. Mayer. The latest news from Oscar is a card dated April 6, 1922 post-marked Habana, Cuba. — R. F. Morrison, Home Address: 55 Fanshaw Avenue, Yonkers, N. Y. Business Address: 25 Broad Street, New York City. Engineer. M. I. T. to Coast Artillery. Commissioned 2d Lieutenant, C. A. R. C. January, 1919-January, 1920, Engineering Work; January, 1920-January, 1922, Engineering work in Belgium, principally, and in England and France incidentally. — A. C. Muller reports the following: "The war having cheated me out of a graduation at Tech, I am now making it up at Columbia. Taking a Master's degree at the School of Architecture: Commencement tomorrow, Academic procession, ritual, gowns, flowers, girls, and everything. — Placed third in Rome fellowship competition, so I won't be able to go over again until next year. In the meantime I'll be back with George B. Post & Sons, Architects, devoting my spare time to my personal practice which though small, never seems to die off completely. Best wishes, A. C. Miller." Address: 263 East 19th Street, Brooklyn, N. Y. — J. H. Nelson sends in the following which is of interest: "Just returned to Boston from two years in interior of China via Malay States, Ceylon, Egypt and Europe. Hope to

return to Far East in next few months." Address: 53 Moraine Street, Boston, Mass. — J. P. Putnam is now connected with the Narragansett Electric Lighting Company as a draughtsman. Home Address: 22 George Street, Providence, R. I. — Arnold B. Staubach writes in from the foreign shores of New Jersey: "You might put this note in the REVIEW for me some time, that Glen Ridge is not in the wilds of New Jersey, but within the civilized Metropolitan district, eleven miles from New York, three from Newark, Home 'phone, Glen Ridge 5897, Business 'phone, Mulberry 3670 and would be pleased to hear from my acquaintances that might pass through New York. Yours sincerely, *Arnold B. Staubach.*"

J. Braverman, June 12, 1922: "Really do not know what to write. 1915-1916, M. I. T. Course X, transferred to Carnegie Tech in Pittsburgh. 1917-1920, B. S. in Chemical Engineering. 1920-1921, Work in dry color line, helped build Noble Color Works in Hoboken, but had no financial interest. At present treasurer in West Side Chemical Charcoal Co., Newark, N. J." Address: 32 Elisabeth Avenue, Newark, N. J.

E. F. Doten reports as follows June 13, 1922: "Upon recently returning to my city where I am now making my home, I found a card from you asking that I send a little dope regarding myself. I came very near giving it to you personally when I was in New York just a week ago, but poor telephone service prevented my reaching you by phone and business appointments prevented my making a personal call upon you. Our good friend Oscar Mayer can vouch for my general appearance not approaching the grave, for I ran into him at the Technology Club for a few minutes one evening just a short time ago. We had a good old chat and Oscar seems to think that the percentage of 1919 that still retains the single blessedness, is continually decreasing, and he as much as admits some day the Class will be 100 per cent on buying double tickets for our Class reunions.

Also when in the east, which happens for me about once a year on an average, I got in touch with Rod Blood, Alan McIntosh, Maurice Goodridge, John Carter and a few of the other boys and found out a little about what the progress of some of the members of 1919 actually is. I wish I could convince some of the boys to move out to this country, for we have some good times around here. Of course you won't discover this the seat of learning that Boston rates, but still that may be offset by some of her features.

As for myself, the camshaft business seems to occupy most of my working hours. Although we put out just one item, we are aiming to become specialists in that line and we get into some nice little problems at some times. Business is gradually improving with us, and soon we hope to be able to put into working practice many of the improvements that have been schemed out during the more or less dull months of nearly two years. Any of the boys who are interested in this section of the country will get in touch with me, please, and I'll try to tell them why this should be a stronghold of Tech men. Yours very truly, *Ev. Doten.*" Address: Muskegon Motor Specialties Co., Muskegon, Mich.

Chuck Drew, June 12, 1922: "As this is getting rather close to the last day, it will be short, if not snappy, in deference to the overworked editorial staff. I came along 'back home' in September and have been in the local office of the Securities Department of the above outfit since that time. The company is beginning to expand its oil marketing division in this locality so there is plenty of work in prospect. As a six months old married man, I certainly recommend it. I am hoping to get 'back East' for a week this fall and have a chance to see you and some of the others. With all good wishes, Ever, *Chuck Drew.*" Address: care H. L. Doherty & Co., Metropolitan Bank Building, Minneapolis, Minn.

Donald C. Stockbarger, 21 Ellery Street, Cambridge, Mass. — Carl E. Thomas, 37 Holt Street, Waverley, Mass. — Alfred L. Warren, 11 Cleaves Street, Roxbury, Mass.

Births — Mr. and Mrs. Freeman H. Horton announce the birth of a baby daughter, Martha Jane, on February 8 of this year.

Weddings — Mr. and Mrs. B. Bornstein announce the marriage of their daughter Evelyn Bernadine, to Bernard Simpson Coleman on Sunday evening, June 25, nineteen hundred and twenty-two, at Temple Emanuel, Paterson, New Jersey.

Mr. and Mrs. H. A. Zinn announce the marriage of their daughter Norma Marie to Mr. Timothy Edward Shea on Tuesday, June sixth, nineteen hundred and twenty-two, Galien, Michigan. At home after July first, 14 Intervale Place, Yonkers, New York.

Announcement is made of the marriage of Miss Olive Amsden of Allston, Mass., to Holden C. Priest of Brookline, Mass.

CHANGES OF ADDRESS

E. H. Aldrich, Wisconsin Rapids, Wis.; F. A. Bermingham, Box 617, Saranac Lake, N. Y.; W. T. Biggar, 18 Windermere Road, Boston 25, Mass.; S. H. Breed, care Baton

Rouge Electric Co., Baton Rouge, La.; P. W. Carr, care Pejepscot Paper Co., Lisbon Falls, Me.; J. S. Carter, 59 Elm Street, Melrose, Mass.; Noel Chadwick, 158 Bay State Road, Boston, Mass.; C. A. Chayne, Room 1-214, Massachusetts Institute of Technology, Cambridge, Mass.; L. M. Dalton, Milton, N. H.; Blake Darling, 64 Farmington Avenue, Hartford, Conn.; C. P. Davis, 342 Ashland Avenue, Buffalo, N. Y.; E. F. Deacon, 5381 Pershing Avenue, St. Louis, Mo.; C. W. Drew, care Henry L. Doherty & Co., 623 Metropolitan Bank Building, Minneapolis, Minn.; W. J. Farrissee, 107 North Bussey Avenue, Urbana, Ill.; G. C. Fleming, G. & J. Tire Co., Indianapolis, Ind.; R. C. Flewelling, 2945 Van Buren Place, Los Angeles, Cal.; F. W. Griebel, 353 Highland Avenue, Somerville 44 Mass.; D. C. Hall, 634 Lafayette Avenue, Palmerton, Pa.; G. B. Hirsch, 506 Market Street, East Liverpool, Ohio; A. G. Hoffman, 117 Nott Terrace, Schenectady, N. Y.; James Holt, 25 Lafayette Street, Arlington, Mass.; F. H. Horton, Brodowntown, Fla.; A. W. Hough, 75 Center Street, Pittsfield, Mass.; C. W. Hyde, 18 Brimmer Street, Watertown, Mass.; G. A. Ingles, 97 Cambridge Street, Fall River, Mass.; L. A. Jackson, South Pittsburgh Water Co., Pittsburgh, Pa.; J. L. Karmire, care Merchants National Bank, Muncie, Ind.; Joseph Kaufman, 12 Browning Avenue, Dorchester 24, Mass.; A. S. Kelsey, 163 Fremont Street, Peekskill, N. Y.; Carlos Krebs, 37 Robinwood Avenue, Jamaica Plain, Mass.; Lieut. John F. Lavagnine, Fort William McKinley, Manila, Philippine Islands; W. R. Mackay, 327 East Lanvale Street, Baltimore, Md.; Israel Maizlish, 53 Warren Street, Lynn, Mass.; John Meader, care Shanghai Horse Bazar & Trading Co., Shanghai, China; M. A. Michaels, Home Club, Meriden, Conn.; R. A. Montgomery, 213 Second Street, Niagara Falls, N. Y.; J. H. Nelson, 53 Moraine Street, Boston 30, Mass.; Fumio Oda, Hyushu Imperial University, Fukuoka, Japan; Sherwood Page, 36 Spring Street, Bangor, Me.; C. H. Paulsen, Hingham, Mass.; E. F. Pierce, Jr., 46 Clifton Park, Melrose Highlands, Mass.; Margaret Pierson, 6 Alwington Rd., Chestnut Hill, Mass.; Clara Poppic, 660 O'Farrell Street, San Francisco, Cal.; J. W. Reis, 3 Alexandria Street, Pasadena, Cal.; A. G. Richards, 21 Standish Street, Cambridge, Mass.; S. A. Sherman, 16 Clarks Hill Avenue, Stamford, Conn.; R. R. Litehiser, 100 13th Avenue, Columbus, Ohio; R. C. Lockwood, 51 West 48th Street, New York City; R. B. MacMullin, 33 Vernon Place, Buffalo, N. Y.; Ray Powers, 2716 A. W., Corvallis, Ore.; W. F. Saunders, The American Chamber of Commerce of Mexico, Apartado 82 bis, Mexico City, Mex.; E. L. Schwartz, 63 North Grove Street, East Orange, N. J.; E. F. K. Seifert, 226 East Water Street, Lock Haven, Penn.; A. G. Smith, 102 South Central Avenue, Chicago, Ill.; C. R. Sullivan, 135 Hillside Avenue, Newark, N. J.; F. A. Travers, 66 Howard Street, Haverhill, Mass.; R. Van Neste, 28 Algonquin Street, Boston 24, Mass.; Easton Webber, 35 West North Avenue, Atlanta, Ga.; R. K. Wells, 40 Sea View Avenue, Winthrop, Mass.; B. L. Whorf, 30 Webster Street, Hartford, Conn.; Ellen E. Williams, 365 Marlboro Street, Boston, Mass.; Nai Hang Leung, care Che Loong, 266 Des Voeux Road, Central, Hongkong, China; Uhachi Nabeshima, 9-4 Chome Koamicho, Nihoubashi-Ku, Tokio, Japan.

G. G. Fleming, June 8, 1922: "Nothing to report in answer to your recent postal clamoring for news." — Homer Howes who started with 1919 and who put the Tech back on its feet after the war was in town for a few weeks. He is a traveling auditor for Bemis Bag with the United States for territory, quite a patch of ground to roam about in. — "My regards to any of the zinc folks you may happen to see. G. G. Fleming." Address: G & J Tire Co., Indianapolis, Ind. — R. S. Hunt writes the following about himself: "I trust you will overlook my tardiness in writing but since the war I have been more or less in doubt as to what Class I really belonged to.

"I did not receive my diploma till last June but on it I was labelled as of the Class of 1919 so I assume that I am still a '19 man in spite of the fact that I strung along with the Class of 1920 for a year and received my degree with the Class of 1921. At present I am working on a research problem under the direction of Dr. Allan Winter Rowe of the Tech Advisory Council and of the Boston University Medical School and hope to receive a Ph.D. some time, if all things go well. I have not seen any of the old crowd since last June and except for the REVIEW I might think that the whole Class had passed beyond. Hoping that every '19 man will be able to get together once again, I am, Yours in '19, R. S. Hunt." Address: 150 Redington Street, Swampscott, Mass.

R. A. Montgomery, June 13, 1922: "I am now located with the Carborundum Company at the Niagara Falls plant as Ceramic Chemist in the Wheel Department. Since this is the Mecca for all brides and grooms, I will expect a visit from many of you in the near future. Don't hesitate, Fleming, Flynn, Burbank, eventually you will be here.

Mrs. Monty joins with me in extending a cordial invitation to all of you who bring their brides and we promise to give the list of guests in the fall number. Address: 1624 Niagara Avenue, R. A. *Montgomery*."

The following is a list of men who received their degree with 1921 but are classed with 1919:

J. H. Becker, 953 Vine Street, Clyde, Ohio. — Deceased.
 H. DeWitt Corthell, Laramie, Wyo.
 Cutter P. Davis, 71 Waldeck Street, Dorchester, Mass.
 Andrew Deane, 853 Hancock Street, Wollaston, Mass.
 Henry S. Derby, 81 Oxford Street, Somerville, Mass.
 William J. Farrisee, 21 Follen Street, Boston, Mass.
 George F. French, 42 East 78th Street, New York City.
 Ross E. Goddard, 78 State Street, Hackensack, N. J.
 Arthur R. Harvey, 511 Yankee Road, Middletown, Ohio.
 Roscoe H. Hysom, 1200 Massachusetts Avenue, Cambridge, Mass.
 Ira P. Jone, 713 18th Avenue, Nashville, Tenn.
 Arthur F. Kaupe, 236 Howard Avenue, Stapleton, S. I., N. Y.
 Donald W. Kitchen, Lawrence, Mass., Box 396.
 Edgar H. Lawton, Hartsville, S. C.
 Robert R. Litechiser, Eaton, Ohio.
 Oscar S. Martinson, Barre, Vt.
 Wesley B. Miller, 184 South Long Beach Avenue, Freeport, N. Y.
 John P. Putnam, 535 Beacon Street, Boston, Mass.
 Karl F. Rodgers, 156 Pearl Street, Somerville, Mass.
 Russell H. Savage, 27 Long Avenue, Allston, Mass.
 Edgar R. Smith, 1105 Franklin Street, Wilmington, Del.
 Ralston B. Smyth, 21 Larchmont Street, Dorchester, Mass.
 Chester C. Stewart, 6 Summer Avenue, Medford 55, Mass.

1920

KENNETH F. AKERS, *Secretary*, 54 Dwight Street, Brookline, Mass.

Hello Gang! Once more I have the same sad story to relate! The great dearth in the matter of letters from you all still exists. However, a few of the bunch have favored me with news and I will put with theirs the little I have gleaned, from hearsay, and personally.

Frank Bradley sends us the announcement of his engagement to Miss Esther E. Ryan. By this time he may be married. We will all be looking for that news, Brad. — Wendell P. Sammet, who started out with us back in 1916, has graduated with '22, but desires affiliation with '20. Owing to his services in the World War he was denied the four years with our Class. I am sure we will all welcome him to our crowd once again. — Harm Deal has accepted the position at Iowa State College as instructor of wireless telegraphy. He is to be in full charge. This news came from an *Associated Press* clipping, Harm! — why the devil don't you write the gang, Harm? Snap into it!

Edward F. Badger has joined the gang of prospective benedicts. His engagement to Miss Anna Winifred Cozens of Newton Highlands has been announced.

"Jawn" R. Perkins is still at the Field Artillery School at Camp Knox, Kentucky. Married life, going to school, and being chief assistant in housework to Mrs. Perkins gives friend "Jawn" a full day!

The following from good old faithful Bub I submit in full:

"Noting the sad lack of news in the REVIEW, I am hastening to give you something that you can use at your discretion. I hope you can use a little of it anyway.

The last time that I foregathered with you was at the Alumni banquet in June, 1921. At this time I had just left the New Haven railroad. For a period of time I lived the life of a retired business man.

At the close of this interval I went to work for a civil engineer who kept an office in Taunton, but whose work was mostly outside of the city. The first place I landed in was the Belchertown State School for feeble-minded children, located in Belchertown, Mass.

The town is nine miles from Holyoke, Mass., and at least double that distance from anywhere at all as far as the convenience of reaching the place goes. The school is in the process of construction and will not be completed for some time yet. About fifty feeble minded children (locally known as 'boobs') were there in a temporary colony. My work was in connection with the construction of roads and a tunnel to carry the heating and lighting service in the place. It was a great life, and the water system was so arranged that one was likely to get beautifully covered with soap, and then find that the available supply of water was finished, and you could then complete bathing in any manner that might suggest itself. The boys were crazy for money and a wonderful shine could be obtained for five cents. This lasted for some six weeks and then it was on the cards that I should graduate to a more fitting occupation as became the dignity of a degree holder of a technical school.

This led to the Foxboro State Hospital for the Insane where I was in charge of the building of a foundation for a new barn for the live stock. There I had only patient labor to do my work. Three attendants were given to me to do the actual handling of the patients, so I was in no way responsible for the conduct of the patients placed at my disposal. Right here I want to say that just because a man is mentally unbalanced a little, he is no fool; most of them are crazy to the same degree that a fox is. Try and get them to work if they don't want to, just try! Life at Foxboro was sure a grand round of pleasure. The crowd down there was a lively crew and dances and movies made the round of pleasure. The telephone operator is a good friend to have. The whole institution knows your business long before you have any idea of the same. Most of the employees don't bother to keep all they know to themselves, as I soon found out. Cold weather came while I was still at Foxboro and made further work for the year impossible as I was doing my foundation work in concrete. With much regret I left the country and returned to Taunton near Christmas time. Another man who was working for Mr. Hayward and I went up to the Taunton Institution and finished some work there. The day after Christmas the two of us started for the insane hospital at Grafton, Mass. We made a topographical survey of the place. The coldest days we stayed inside and drew up a map of the place as we got the work done. Snow up there was always much deeper than at Boston, but was never deep enough to interfere with the trolley service to Worcester (for which the gods be duly thanked).

The middle of March I received an offer from the Edison Electric Light Co. of Boston and accepted. At present I am in the steam division of the standardizing and testing department of this concern. The change from civil engineering to mechanical was welcome to say the least. The change from the social life of the various institutions was not so pleasant as might be expected to anyone unfamiliar with the inside life of the numerous State hospitals. As far as I could note, every effort was made to give the patients as good treatment as was possible. The main handicap is lack of money to properly carry out the affairs in these places. The employment problem is a hard one for the heads to solve and the wages paid to the employees prevents high grade labor from entering the service.

I spent a week-end with Merriam a short time ago and had a most enjoyable visit. He is having a fine time traveling over the country at his concern's expense. My regards to any of the crowd that may be in Boston and see you. If the royal class secretary gets lonesome he might try the Cambridge side of the river as there is at least one 1920 man who will be glad to see him. Hoping this will partially satiate your desire for news and in the words of Mutt 'use discretion' in accepting wooden money, I am, Sincerely, *Robert W. Mitchell.*

Heine writes me the following which is of interest to all the gang. Glad to hear from you, Heine.!

"The minutes for 1922 get thinner and thinner, but it's our fault and not yours, so while the spirit moves I am going to Carona to you. Jim Gibson has probably passed on all of the news but it may bear repetition.

Hand Caldwell tells me that he has been recently appointed assistant superintendent for The Zinsser Company of Hastings-on-Hudson. They are manufacturing chemists but have a well organized research department which, I understand, is carrying on extensive investigations in the art or science of preparing home brew — at least so advised our classmate. Bevo Brookmann is enabling the Phoenix Bridge Company of Phoenixville, Penn., to continue to make money by his tireless efforts. To quote from his recent letter: 'Realizing the great strides in engineering I am making your attempted thrust at my

profession via the Meccano set is without effort. Hence I let it pass me, much as I would a glass of one-half per cent beer.' — Perk Bugbee dropped in on me the other day in returning from an Atlantic City National Fire Protection Association convention. Perk is on the *qui vive* in his profession as we would expect. If you don't believe it, consult a current issue of *Industrial Management*. Theirs is an organization consisting of Tech men and they are contributing much that is constructive in the prevention of fires.

I was the last of the 1920 men to leave the aluminum company which I did in March. Since that time I have been affiliated with Mr. Eugene Szepesi of Boston in the field of industrial engineering. At present we are working in the reorganization of Philadelphia textile organizations. The work is interesting and we feel much needed. The textile branch has made extraordinary strides in the development of its mechanical equipment but modern management methods have been very slow to percolate through the branch probably because of the high development of the machinery which tended to make the operating managements pretty well satisfied with their plants. With my best personal regards, Ken. — *Henry C. Haskell.*

Here is what Pierpont writes: — sounds good, fellows!

"I got up this morning at eight thirty, so therefore the time for this letter; I will have to admit that both are out of the ordinary. Have received no news from the old gang about Boston for quite an age. I did receive a card from Ned Murdough Christmas, but have been so damn busy working here that I have neglected most all my personal correspondence. Bo! how would you like to have an income of about five thousand dollars each twenty-four hours. Yes, there is a bird over here at Orange that gets that, and even more and the truth of the case is sickening. He was so poor and humbly living in a little old shack, that he didn't want to move and let another well go up where his house was located. Hard lines!

Come right on down and I will give you all the necessary inside information to make your million, Ken. I have a good proposition to go with a company over in Louisiana, but I have not swung out as yet. I expect to before many months though. I am just around watching now. Hurry up and come on down Ken; make a million then you can go back home — now isn't that simple enough? My regards to the gang, *George B. Morgan.*"

Jimmy Gibson drops in on me occasionally and shows signs of prosperity in the real estate business. When you get married, fellows, settle in the Newtons and Jim will sell you a house cheap (?).

As for me, I have just taken a two-weeks vacation from insurance inspecting and toured Virginia to some extent. L. D. Wilson, one of our worthy members in 1920, gave me the honor of being best man at his wedding in Hollins, Va. He and I, with two other men, motored from New York City to Hollins, Va., which is six miles from Roanoke. We had a delightful trip, stopping at Gettysburg, and Natural Bridge on the way down. I came back by train by the way of Richmond and Washington. At present I am in Greenfield, Mass., which is only temporary, however. I am always in Boston week ends if any of the gang wish to get in touch with me. Yours for 1920 and more letters, *Ken Akers.*

1922

ERIC F. HODGINS, *General Secretary*, Room 3-209, M. I. T.

No precisian would ever call these lines Class Notes, but that is chiefly because no one in the Class has yet done anything notable. As your secretary writes this, it is precisely three weeks since the tent blew down and flung us into the world. Consequently, no member of '22, is yet chairman of the board of directors of anything. We must confess to a slight twinge of disappointment in recording this. We had high hopes for Ab Johnson.

On second thought, perhaps we are doing an injustice to Ab. Perhaps Ab is chairman of something, and we haven't heard the news yet. This is easily possible. The intricate news-gathering mechanism of 1922 has not yet started to function actively. It is not supposed to. In fact, your secretary is not required to fill any space soever in this number of the REVIEW. He was merely told that he might if he wanted to, and that settled it. The proffer of white space is always very provocative to your gensec.

We state freely at the outset that the only bases of this communication are the random conversations between the gensec and a few of his friends and enemies, mostly occurring at times before the gensec knew he was to be charged with the Responsibilities of his present High Office. The reportings appended are thus scant, casual and unofficial, and presented merely as a guarantee of good intention. You see, we meant to interview all our friends as we sobbed out good-byes after graduation, and find out where they were going, and what they are planning to do there; but we didn't, because the fates got together and puffed the tent down. As an almost direct result of this down-puffing, we said no good-byes at all: we were put out of action for the rest of the afternoon. No, it wasn't anything serious, thanks. After the tent collapsed, the gensec (who had no particular cause to be interested in the award of diplomas) went to the back of the tent, and joined the thin red line of heroes that were keeping it from complete collapse by tugging at the rear guy ropes. He selected a rope that was urging dangerously at its stake, and applied to it a force designed to be equal and opposite to the fraction of the total wind pressure borne by that single rope. (*Cf. Fuller & Johnston, Vol. II.*) It was not. Wherefore the rope began to drag the gensec's heels through the campus pebbles. Dr. Wiener of the Department of Mathematics saw his need, and rushed to his assistance. The good doctor once gave the gensec a "C" in M22, but he equalled this generosity by the mighty heaves he put into that straining rope. He flung himself in front of the gensec, gripped the rope with a special grip invented by himself at the Aberdeen Proving Grounds during the war, and put his entire vasomotor system into one behemothial heave. Now it happens that his grip was better than the grip of the rope where it was fastened to the tent pole, and the better grip won. The rope slipped its mooring, the loose end whipped in the air, Dr. Wiener and the gensec took about twenty swiftly running back-steps in perfect unison, and then the good doctor sat on your secretary.

He was awfully nice about it, of course, so we assured him that it wasn't really serious, and went home to change to our other suit, and remove a large quantity of impacted gravel. Although we were successful in this, we were unable to shake off a certain feeling of lassitude, which persisted for the rest of the day. And — which is what we started to say in the first place — when we returned to the Stute, everyone had left, and there was no one for us to say good-bye to.

This was the end to a day of discouragement and disillusion. The tent-rope episode was as nothing compared to our discovery that Eddie Miller had feet of clay. We had watched Eddie all through the afternoon, as his eyes roved over that billowing tent roof, and we had supposed that he was licking his chops against the time when She would Let Go. We assumed that when She did Let Go, Eddie would take complete charge of the rescue work. He did nothing of the sort. It was one of his finest chances and he passed it by. It was in his power to save twenty-five hundred people, and he lifted not a finger. He needed only to have ordered them out of the tent, and he'd have saved them. But he didn't: he left that to the Acting President. Twenty-five hundred people are a good many to save. It would not have been Eddie's greatest single achievement, but it would have swelled his grand total quite a bit. When the gensec found that Eddie hadn't saved him, he felt as though he didn't want to be saved at all. The subsequent experience with the tent rope, and our consequent inability to question our classmates concerning their desires and dreams and powers, was not half so bitter.

But if this article is designed to show course secretaries how easy it is to obtain news without seeking it, we had better submit Exhibit A without more preamble. Exhibit A came to us, unsought, from a clipping bureau. Its importance justifies reproduction in full. We quote from the Dayton (Ohio) *News*:

ENTERS BUSINESS

GREENVILLE, May 27. — Joseph C. Patty, son of Mr. and Mrs. W. O. Patty of this city, who recently was elected treasurer of the Senior Week Committee at the Massachusetts Institute of Technology, will assume the office of assistant plant manager of the Greenville Gravel Co. following his

graduation from the Institute in the spring.

Patty's graduation thesis is on "Corporation Administration and Control," and is intended to have a direct bearing on the above company. The company was started and organized by Patty's father and uncle in 1900, and at present his brother, C. E. Patty, is vice-president and secretary of the organization.

And so Joe's future is assured. He did not mention this in a note sent to the gensec from Montreal on June 16. He mentioned merely Notre Dame Cathedral, French "No Parking" signs, and other items of cultural interest. He likewise enclosed a check. God rest you, Joseph. He (Joseph, not Jehovah) has now sailed from Montreal on the beginning of the "Intercollegiate Tours," which will take him to England, the continent and Asia Minor. It may interest antiquarians to know that Joe's address while in the Holy Land is "P. O. Box 74, Jerusalem, Palestine." It is from here that Joe will return to the gravel business in the fall.

Other items of equally breathless interest are not yet available. But all course secretaries are asked to note the space that jottings like the following, made from remembered conversations, will displace if properly utilized: Al Browning, XV, is in Buffalo now, whither he journeyed by foot, with an occasional auto ride. He left on the thirteenth of June, so he is presumably there as the presses clock off these words. His address is 338 Summer Street, which is the X-A club house. — Johnny Strieder, VII, is planning to attend the Harvard Medical School in the fall. Johnny's thesis abstract, it will be remembered, was the hit of the graduation exercises. We are midway between the bissextiles, but we'll wager there was more than one vestal in the audience who listened to Johnny discuss the causes of mould in bread, and marked him for her own, when leap-year next should come. — Bill Elmer, VI, draftsman of so many hard-boiled women for *Voo Doo* (whose beauties your secretary used to hymn in eight-point leaded Cheltenham bold) is now in California, resting from his labors. He has declared his intention of returning to Boston in the fall, but this was before his eyes had turned on Hollywood. — Bill Taft, X, is about to assist in designing an ice-plant for Philadelphia. Philadelphia needs one. — We understand that Eddie Koehler, X, is going to be an artificial silk-worm. With a new concern, we believe. The gensec does not know the location of Eddie's cocoon. — Erb Dittenhofer, X, is taking the X-A practice school. — We have no news of Roger Ingalls, the fourth horseman of this Course X Apocalypse. — Vernon Whitman, XIV, is Somplace, just now, from which he will return to the Institute in October for graduate work. He has an assistantship for the next three terms — in Physics, we fear. We don't like to think of Vernon as a Physics Instructor. — Don Carpenter, IX-B, our revered president, will be with the du Pont Company, after July 5. At the Arlington, New Jersey, works, helping them make Pyralin, which, if we have read our *Saturday Evening Post* to good advantage, is an artificial ivory. As if there wasn't enough of it in the world already. — Bill Stose, X, is taking his ease in Woodstock, New Hampshire, preparatory to plunging into X-A work in July. — Parker McConnell, the Woolworth Secretary (V and X) will plunge into the same thing, at the same time. — So will Bob Purinton, Brod Haskell and a number of other notables. — Your gensec would sooner plunge into a vat of concentrated sulphuric acid, but every man to his taste. — Tom Alder, XV, is supposed to be in Montclair at present, resting from the ardors and endurance of the past four years. — Hugh Haley, VI, has been seduced by the General Electric ads in *Voo Doo* (the only part of the magazine he ever read) and is going to work for the company. — Mal Johnson, V, is either approaching, in, or receding from, San Francisco. If he should meet Bill Elmer there, there might be interesting eventualities. — Tom Berlage is probably on the high seas bound for home by now. Destination, London. Tom's years here have bound him rather strongly. He parted from these United States with all the reluctance of a porous plaster. He thinks he may return.

The above was written while the gensec was in Cambridge. A few days later he left for New York. Apparently all the rest of the Class has marched on this city like

banditti coming to sack it. On June 30, H. E. Lobdell, '17, and the gensec were cruising about Manhattan on business for the new TECHNOLOGY REVIEW (see first issue in November. — *Adv.*) and between the hours of 12.30 and 3.30 the gensec met four classmates. The first one was Frederic Alfred David George Edward Henry Untiedt, V, whom he met at the Chemists' Club. (Imagine your secretary being allowed into a chemists Club! If the doorman had ever known we didn't finish our thesis —) Frederic Henry is about to begin on his lifework of organic chemical research. He is not yet sure where, however. The gensec, whose organic laboratory desk was once contiguous to Freddie's, thinks that a good location would be slightly outside the three-mile limit.

The second and third '22 men, we encountered simultaneously. They were Frank Didisheim and Mort Bloom, both X. We came upon them in the cloisters of the New York Public Library. They were watching the elevators, we can't think why. They and your secretary spent a few happy moments reviewing their bright college years, and wondering What the Old Place was Like, Now. Mort had just returned from a hike made with a few other hardy souls, into upper New York State.

The day's fourth '22 man, we crashed into on the steps of the New York Technology Club. He was Philip Caplain, XIV, who has already justified his four years of higher education by landing a job with an electrochemical corporation. His headquarters will be New York, he admitted. Further than this, he did not specify. Phil, being a modest youth, would probably have refused to concede even this much, had he known he was talking for publication.

That was one day's grist. Not so bad, in our opinion, taking into account the large and cosmopolitan character of New York's present population. And to have met all these Tech men in centers of culture and learning is another notable thing. Usually, one meets out-of-town friends under circumstances that have a tendency to be embarrassing. We remember, there used to be a saloon at the cor — oh, but that's sordid. It's fortunate things like that can't happen any more.

It is now time for the finally — brethren. You understand, we hope, how puerile and puny these notes will seem by comparison with the product which '22 will begin to turn out in November, when the eleven course secretaries begin an active correspondence with the home office. We hope every one got a copy of our "Parting Shot" on graduation day, not for its literary value, but because it gave a list of all these course secretaries and their mail addresses. There were probably those who did not. Hence, we reprint the list below. The addresses here supersede the addresses in the "Parting Shot," and hold good until definite notification is given to the contrary:

Course I. J. F. Hennessy, 16 Henry Street, Brookline, Mass.

Course II. J. E. Sallaway, 125 Cushing Avenue, Dorchester, Mass.

Course III. G. D. Ramsay, 44 Ormond Avenue, Sharon, Pa.

Course IV. G. S. Holderness, 289 Newbury Street, Boston, Mass.

Course V. S. P. McConnell, 37 Oak Street, Mt. Carmel, Pa.

Course VI. Fearing Pratt, 120 Main Street, Hingham, Mass.

Course VII. A. H. Stevens, 11 Wollaston Avenue, Arlington Heights, Mass.

Course VIII. T. H. Gill, 210 East Market Street, Scranton, Pa.

Course IX. T. H. Gill, 210 East Market Street, Scranton, Pa.

Course X. S. P. McConnell, 37 Oak Street, Mt. Carmel, Pa.

Course XI. F. J. Laverty, 64 Park Terrace Road, Worcester, Mass.

Course XII. G. D. Ramsay, 44 Ormond Avenue, Sharon, Pa.

Course XIII. C. F. Blanchard, Lapointe Machine Tool Company, Hudson, Mass.

Course XIV. Fearing Pratt, 120 Main Street, Hingham, Mass.

Course XV. R. H. Brown, 75 Glen Road, Jamaica Plain, Mass.

(The gensec's own address is Room 3-209, M. I. T., and if anyone deigns to write to him, he will be happy and proud. He will always be glad to act as Best Man, Godfather, or Honorary Pall-Bearer, at a nominal fee.)

And now, '22, that you know where to write your news, *write* it. Don't run afoul of the postal laws and regulations, but otherwise unburden yourselves to the fullest extent. There is but one restriction — made with a nasty leer at '21. It is: don't put quotation marks around nicknames. Such is a violation of the one rule in our style-book. If this department has occasion to refer to Al Browning (and it expects to have many such) it will refer to Al Browning — not to "Al" Browning, 'Al' Browning nor "'Al'" Browning. So let others of the Class beware.

For the rest, employ your own methods and idioms, and do it frequently. We are the largest Class ever graduated from Technology, and by the extent of our Class notes the rest of the alumni will judge whether our quality is commensurate. So write to us. Don't be a straggler. Don't make a gap in the ranks. Don't join the melancholy list of names published in every REVIEW under the label of "Addresses Wanted." Remember, as we said in the "Parting Shot," that knowledge of you is not only pleasing to the rest of the Class, but may be of the greatest professional benefit to you, through the knowledge of your post-Institute career which the Personnel Bureau is thus able to obtain. Keep in touch with the Stute, therefore, and as you flit from job to job, give the gensec your new location with such speed and certainty that never, until after you are dead, will there be the slightest doubt of your address.

And, if you have, during your lifetime, become a sustaining member of the Alumni Association, not even then.

OUR PARIS LETTER

Tech Men in *La Ville Lumiere* Paris, le 3 Juillet, 1922

THE Paris Association has not amounted to very much since George Gibbs left us. The number of Technology men — more or less permanently in and around Paris — has dwindled until there are but very few of us left. Clarence J. Berry, VI, '13, is now in the technical department of the International General Electric Company, with headquarters at 4 rue d'Aguesseau. He seems to make the round of the European capitals every month and I haven't seen him since March.

McCeney Werlich, '15, has his headquarters at 3 rue Taitbout. He is manager of the European branch of the American Locomotive Company, and is more or less like Berry — always on the go! One has only to watch the "What the Americans in Paris are Doing" column in the *New York Herald* to follow Mac. One day we learn that "Werlich — who has just returned from Spain — was one of a gay party at the Cercle Interallié." The next day we are sure to see that "Mr. McCeney Werlich, who was yesterday one of a gay party at the Cercle Interallié, is leaving today for a business trip to Spain." And so it goes! We don't know what he does in Spain but we should expect to see the railroads choked with American locomotives.

Prof. Selskar M. Gunn, '04, or '05 — it's not for me to say which — will transfer his office in the next few days from Prague to Paris. When Professor Gunn left the Institute in 1917, he came to France as director of the Bureau of Education and Propaganda of the Commission for the Prevention of Tuberculosis, a special commission of the International Health Board (Rockefeller Foundation). In this position, he developed a system of health education and propaganda — general in character but directed particularly against tuberculosis mortality — which has served as a model for similar organizations in several European countries. When Professor Gunn left this work in 1920 it was carried on by Edward Stuart, '10, and later by Albert W. Buck, Bates '12, who did post-graduate work in Course VII, until he became an internationalist by joining up with that famous American Red Cross Relief Expedition to Serbia in 1915. More of this later, but let's get back to Professor Gunn.

After a well-earned and much-needed rest during the summer of 1920, Professor Gunn came back to Europe in the autumn for the International Health Board as advisor to the Minister of Health of Czecho-Slovakia with headquarters at Prague. His field of action has been gradually extended to Austria, Hungary and Poland. With the dissolution of the Commission in France as such, he will undertake in addition the supervision of the remaining activities until such time as they will have been completely turned over to the French authorities. Until the end of 1922, his address will be 3 rue de Berri, Paris.

Until recently we have had with us Major Rudolph W. Riefkohl, '08, C. A. C., who has been in charge of the transportation of the Graves Registration Service in France. "Rief's" garage has been out at St. Ouen, and although the headquarters of the Graves

Registration Service is only a few minutes walk from my office, I have seen very little of him.

Another M. I. T. man loose in Europe is Richard B. Cross, '13, who has just been converted from a bull — (he says "fighting") — Spaniard into a Brussels sprout. Dick is the manager of the Belgian branch of the Aluminium Company of America. Like a lot of others, he frequently passes through Paris in his European travels, but only once has he shown up at 3 rue de Berri.

The secretary was pleased to greet on June 22, an old classmate, Ross H. Dickson, seeing Europe for the Standard Oil Company. Although he was in Paris but a few days we managed to show him some of the sights — including the Chateau de Versailles.

Buck, of whom I spoke above, is still carrying on the health education of French men, women and children. Inasmuch as the Commission has as its primary object, the prevention of tuberculosis, it has been Buck's job to invent and popularize new methods for dodging T.B. bugs. Just how efficacious his inventions have been, it is impossible to say because as yet I have been unable to devise a system for producing statistics in the absence of facts. However, we have been able in the four and a half years that the Commission has been in France, to increase the number of tuberculosis dispensaries from about twenty-five to over four hundred. The French persons — those in the work, at least — realize that the nation is menaced by tuberculosis no less than by their neighbors to the east and they have taken up the fight with a will that can result only in victory. They are doing so well, in fact, that I am going to turn over my share in the game to them in a few months. I'm sailing in the *France* on September 9, after an absence of almost four years, and I hope to make our acquaintance more than one of correspondence. I have a few very definite ideas about the importance of the study of English in American technical schools and colleges by engineering students, that will not be new to you, but which will, nevertheless, not be unpleasant for you to hear.

Regretting that this is both "Hail and Farewell" for me in the capacity of correspondent — for I am going to ask Werlich to undertake the duties of secretary of the Paris Association when I leave — as well as for you in the capacity of editor-in-chief, I am, with every good wish, *Thomas J. Duffield, '14, Secretary, Paris Technology Association.*

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